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ABSTRACT

This volume describes outstanding community college programs corresponding to the four categories in which programs were originally submitted to the National Council of Instructional Administrator's (NCIA) Annual Exemplary Instructional Program Awards. Section 1 includes the description of three programs that won awards for Initiatives to Incorporate Technology in the Delivery of Instruction. An honorable mention is also contained. Section 2 includes the description of three programs that won awards for Initiatives that Focus on Student Learning. One program won an honorable mention. Section 3 includes edited versions of the entrants in the category, Staff Development Initiatives on Campus to Develop Instructional Leadership. No awards were given in this category. Section 4 includes the description of one program that won the award for Initiatives on Campus that Develop a Climate Supportive of Change. In all, 70 programs are described, including abbreviated descriptions of all programs that were submitted for consideration. Each program cites the institutional contact person, the college address and phone number, and the name of the CEO. An index of participating colleges is contained at the end of the book. (VWC)

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Community College Exemplary Instructional Programs Volume VIII

1996–1997

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An Affiliated Council of the AACC

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Community College Exemplary Instructional Programs Volume VIII

1996–1997

A Publication of the
National Council of Instructional Administrators

An Affiliated Council of the AACC

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Sharon Bradwish-Miller — Director of Awards

At NCIA Office in Nashville:

Donald Goss — Editing, Publication

Susan Goss — Proofing

INTRODUCTION

Community College Exemplary Instructional Programs, 1996-1997 is the annual volume of outstanding academic programs published by the National Council of Instructional Administrators (NCIA).

This present volume contains four sections corresponding to the four categories in which programs were originally submitted to NCIA for its Annual Exemplary Instructional Program Awards. For the 1996-97 year, the awards focused on Campus Initiatives rather than programs. These awards were presented at the annual AACC convention held in April at Anaheim, California.

Section I includes the description of three programs which won awards for initiatives to incorporate technology in the delivery of instruction. An honorable mention is also contained. Edited versions of all other entrants are also included.

Section II includes the description of three programs which won awards for inititatives which focus on student learning and one program which won honorable mention. Edited versions of all other entrants are also included.

Section III includes edited versions of the entrants in the category, staff development initiatives on campus to develop instructional leadership. No awards were given in this category.

Section IV includes the description of one program which won the award for inititatives on campus which develop a climate supportive of change. Edited versions of all other entrants are also included.

In all, 70 programs are described herein.

Each program cites the institutional contact person, the college address and phone number and the name of the CEO. An "Index of Participating Colleges" is contained at the end of the book.

Programs were nominated as exemplary by the participating colleges. Each college determined the category or categories in which to compete. Program narratives were restricted to a maximum 1000 words. For this volume some editing for style and length has been done.

Programs submitted were required to address three criteria in their narrative:

1. Must identify how the program is innovative and creative.
2. Must provide measures of program success.
3. Could be adopted/adapted by other two-year colleges.

In certain instances colleges chose to address each of the criteria in turn within their narratives. In other instances colleges generally covered the criteria, but with no direct reference to them.

Beyond presenting its awards, the National Council of Instructional Administrators makes no judgment on the merit of individual programs, but is pleased to include programs as submitted. Program evaluators were selected by the NCIA Executive Board.

The Council is pleased to provide, as part of its membership services, a copy of this publication to institutional members. On a periodic basis the Council publishes other materials of interest to academic administrators. A quarterly Newsletter is also distributed to all NCIA members.

Additional copies of this publication are available for $15 each. Orders may be sent to NCIA, P.O. Box 210040, Nashville, TN 37221-0040. Checks should be made payable to NCIA.

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SECTION I

INITIATIVES TO INCORPORATE TECHNOLOGY IN THE DELIVERY OF INSTRUCTION

PROGRAM AWARD WINNERS

The Grammar of the Harlem Renaissance
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Contact Person: Dr. Jerry Cotton

"The Grammar of the Harlem Renaissance" is a multimedia program currently being developed by the Learning Skills Laboratory at Cedar Valley College. It seeks to integrate grammar instruction with the study and experience of creative literature, by presenting students with text-based composition exercises supplemented by paintings and musical background.

The first module of "The Grammar of the Harlem Renaissance" is called "Zora Neale Hurston Teaches Sentence Fragments." Students experience the novel "Their Eyes Were Watching God," seeing scenes from the life of Janie Starks (scenes that are actually the paintings of Jacob Lawrence and other artists of the period, as well as works by Cedar Valley College art students) while hearing jazz music by Bessie Smith, Louis Armstrong, Red Nichols, and others. The program creates, one hopes, a feel for the immensely rich period that created a golden age in Harlem in the 1920s; but it also brings to the learner an awareness that grammatical concepts—dependent clauses, subordinate conjunctions, prepositional phrases—are not in themselves isolated intellectual hurdles, but rather the very stuff of great art.

We in the Learning Skills Laboratory are genuinely enthusiastic by what we view as one of the most innovative approaches to developmental reading being created today. We feel that The Grammar of the Harlem Renaissance does not simply fill a computer screen with materials developed decades earlier and as suitable for workbook as for the instruments of higher technology; nor does it ignore, as so many developmental aids continue to do, the fact that urban classrooms, as mirrors of an ethnically diverse society, demand materials relating directly to the students served by today's community college environment. This program excites students. It catches them up in music, sight, and story. They write, in evaluations received so far, that they have "never seen anything like it." They want more, and they wonder why the study of grammar has never been this enjoyable to them before.

Representatives from Harcourt Brace College Publishing Company visited our campus in October of 1995 to view the module we had created. Their initial visit led to four months of controlled testing throughout the campuses of The Dallas Community College District. The three hundred or more responses received

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caused Harcourt to offer a contract to the district for four CD-ROMs: "Their Eyes Were Watching God and Sentence Fragments"; "Bless Me, Ultima and Pronoun/Antecedent Agreement"; "The Life and Works of Langston Hughes and Subject/Verb Agreements;" and "An Overview of Cuban Literature and Run On Sentences." The first disc in the series is now complete and will enter the market on March 15, 1997.

Our goal at Cedar Valley is nothing less than to revolutionize the manner in which ethnically diverse literature is presented to our students. Over forty percent of the students at Cedar Valley College are African-American. Simply offering them a course in African-American Studies, to be taken as an elective at the end of their time here, is not enough. Nor is it acceptable that students completing mandated requirements in one of the nation's largest community college systems have practically no knowledge of writers such as Countee Cullen, Zora Neale Hurston, and Langston Hughes. We want to spread the aesthetic experience of the Harlem Renaissance through our entire curriculum, exciting students as we do so, and simultaneously introducing them to the potential of multi media education.

Miambiance
Miami-Dade Community College
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Contact Person: Louis Molina

In August of 1994, I set my sights on bringing together all the humanities through the magic of multimedia and moving them into the next generation.

I wanted all Kendall Campus students to see what their fellow students were doing in the humanities. I wanted them to share the excitement and the pride. Many students cannot make it to artistic performances put on by our campus. They don't get to see or hear the wonderful concerts, plays, and graphics and architecture exhibits that their fellow students put on. English department's **Miambiance** literary magazine is a vehicle for students to show their creativity in poetry, prose, photography and art, but it left out music, architecture, drama, dance, and video. In order to move the humanities into the next generation, I felt we had to take a step further, and multimedia was the answer. Therefore, I came up with "Miambiance CD: An Interactive Humanities Magazine."

Miambiance CD is an interactive multimedia program which uses the magazine format. It is a new concept in academic student publication. The CD magazine takes advantage of all the power of multimedia to include not only literature and art, but also, music, drama, and architecture.

This interactive magazine allows the user to read or listen to literary works, watch dramatic performances via digital video, take close looks at student art, and watch and/or listen to musical performances. This is a new approach to student publications. The program makes the work of the student-artist more accessible to other students and the community. Anyone can visit the library and explore this CD at his/her leisure offering a unique resource. The CD magazine is also a good recruitment tool for the academic institution. Miambiance CD is a prime

example of the integration of technology into MDCCs teaching/learning efforts and of the promotion of student success. It is humanities for the next generation in which students, faculty and staff can view and interact with the arts, and make necessary connections among the humanities and take pride in their fellow students, in themselves and in their school.

I feel that Miambiance CD excels in the following areas:

1. **Creativity** - It is original. There are no other student multimedia humanities CD-ROM magazines in higher education. Miami-Dade Community College Kendall Campus is the first.

2. **Efficiency** - Miambiance CD contributes to a more efficient way of doing things. In one CD all the disciplines under the humanities umbrella are represented and cross-referenced. We can view dance and drama and listen to music while reading a poem. No other format can perform this as efficiently as multimedia.

3. **Cost-Effectiveness** - Miambiance CD took four and a half months to produce. It is a wonderful recruitment tool for the institution, and for the student who is featured in the magazine, it is a very impressive addition to a resume. I was given release time to work on this project. No special equipment had to be purchased.

4. **Replication** - CD magazines like Miambiance CD can be developed by any institution with a minimum of difficulty.

Foreign Language Collaborative – Distance Learning
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Darton College is the lead institution in a five-college collaborative that shares faculty through distance learning for the instruction of foreign languages and cultures. The five two-year University System of Georgia institutions collaborate to expand and enhance previously limited foreign language offerings in the areas served by the colleges. This Foreign Language Collaborative, which consists of Darton College, Abraham Baldwin Agricultural College, Middle Georgia College, South Georgia College, and Waycross College, allows the five institutions to combine resources to offer students a variety and depth of foreign language instruction that otherwise would not be possible.

Before the creation of the Collaborative, member schools faced two problems: too few qualified faculty members and too few students at advanced levels to make up classes of sufficient size to be financially justifiable. French and Spanish were offered at all the schools, but on an irregular basis since qualified instructors were not always available. Now students are able to complete a three- or four-course sequence in French or Spanish within a year. The Collaborative has allowed member institutions to increase the variety of languages offered to their

students as well. A three-course sequence in German is being taught this year; instruction in Japanese will begin in Fall of 1997, and plans are also being made for Chinese courses.

During the initial planning stage, members of the Collaborative recognized the challenges of offering foreign language instruction via distance learning media. To address these challenges, the Foreign Language Collaborative developed a model for the delivery of quality foreign language instruction that integrates both distance learning and computer-assisted learning. Foreign Language Collaborative classes are offered via the Georgia Statewide Academic and Medical System (GSAMS), Georgia's two-way interactive audio and video teleconferencing system. Members of the Foreign Language Collaborative have equipped their distance learning classrooms with a variety of tools to enhance instruction and communication including VCRs capable of operating over the network, document cameras that allow instructors to display handouts, and scan converters that connect computers to the network and allow the broadcast of multimedia presentations. Foreign Language Collaborative instructors are encouraged to use multimedia in instruction; toward this end each collaborative instructor has been provided with a laptop computer and presentation software.

To ensure instructional integrity is maintained, all remote sites are required to have a facilitator in the classroom. Facilitators monitor students, proctor exams, and serve as liaisons between the site of instructional origin and their home institution. They are also trained to operate the equipment used in the distance learning classroom and provide technical support.

To further enhance student learning, a state-of-the-art foreign language lab is located on each campus. Designed to facilitate students' acquisition of non-native languages, each lab in the collaborative is equipped with 10 Power Macintosh computers with DOS compatibility, allowing maximum platform flexibility. Each computer is fully networked and has access to e-mail, the Internet, and the World Wide Web. Access to the Internet enhances students' opportunities to communicate with the instructor and their classmates, as well as native speakers of the languages they are studying. All collaborative schools also support World Wide Web pages for their foreign language programs. Students can view course guides and syllabi, are able to e-mail homework to instructors, get information on lab hours, and even complete interactive lessons on-line. The labs are also equipped with audio listening and TV/VCR stations for group or individual work. Desktop video conferencing technology, scheduled for full implementation during the 1997-98 academic year, will allow instructors to conduct oral exams and one-on-one help sessions.

Foreign language instruction via GSAMS was initially viewed with skepticism by instructors, in part because foreign language courses are proficiency-oriented and stress real communicative abilities. However, experience with the technology has shown some advantages over instruction in the traditional classroom. "Not only are student-student and instructor-student interactions from one site to another as practical as the same interactions within a traditional classroom, but student-student interactions between sites add the motivating factor of school rivalry while bridging physical distance and facilitating the development of a class esprit de corps. Two aspects of GSAMS technology have enhanced the delivery of instruction: the zoom lens and the document camera. A close-up makes the instructor larger than life and allows in-your-face techniques that are helpful but

would be intimidating in the traditional classroom. Students are able to clearly see the mouth of the instructor demonstrating articulation. The document camera with its zoom capability replaces chalkboard, overhead projector, slide projector, and the traditional method of hand-to-hand passing of items of cultural interest. The equipment allows for a great deal of flexibility and creativity. Students at a remote site may view any combination of images on the monitor, including instructor, instructor and students, other students and site facilitators, items displayed by the document camera, computer-generated visuals, and videos. Students may hear live or recorded sound. The instructor is able to control and facilitate this entire learning experience with the touch of a button.

Assessment of Foreign Language Collaborative courses is conducted each quarter, and an overall evaluation of the entire Collaborative is made annually. Two instruments are used to gauge student satisfaction: a Student Evaluation of Faculty and a Distance Learning Survey. Results of student evaluations show high satisfaction with the quality of classroom instruction, as well as the use of distance learning. In the first two quarters of instruction by the Collaborative, the student success rate averaged 79.5 percent, while success rates in traditional classes range from 63 percent to 80 percent.

HONORABLE MENTION

Project Student Success
Daytona Beach Community College
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Daytona Beach Community College has established a singular focus for the decade: improved student learning and development. To initiate this effort, the faculty, staff and administration articulated a statement of institutional philosophy clearly focused on the needs of students.

Next, the College community identified the refinement of the developmental education program, the curriculum, instruction, and support services, as its highest priority, an outcome of the institutional self-study process. Through a program of curricular and instructional reform, the faculty and staff began to implement a vision of teaching and learning which capitalized on our knowledge of effective program design supported with state-of-the-art instructional technology.

During the two years which followed, a task force comprised of faculty, staff and administration completed a thorough analysis of both the College's developmental studies courses to quantify the impact and reviewed the literature to benefit from the innovations of colleagues nationwide. The study revealed that while three-quarters of the students, entered the college intending to graduate, only a fourth accomplished this goal. Moreover, by the end of their first semester, over half of the entering students were not making satisfactory progress, and almost a

fifth were already gone. The net result was that almost half, 45 percent, of the first year students were gone at the end of their first year of college study.

Further study revealed that two-thirds, 68 percent, of the incoming student population were underprepared for College level study. Moreover, while over 80 percent of these students were placed in mathematics, reading and writing, an equal number ignored their placements and attempted collegiate courses directly, contributing substantially to the institution's overall concern for student achievement and persistence. For those who did enroll, the prognosis was not much better, with students in reading each area having only a fifty-fifty chance of success.

After considerable discussion of these problems coupled with the identification of effective program design elements, the task force designed a comprehensive project to improve student orientation and placement and to reform the developmental studies program. Over the next five years, the College promised to work to implement its new Developmental Programs with a $1.7 million Title III grant. With the goal of doubling the success of underprepared students in developmental studies and ameliorating differences between underprepared and prepared student achievement in college courses, the Student Success project promised a 20 percent increase in students completing their first year of study and continuing to graduation.

Over sixty members of the faculty, staff, and administration have been directly involved in the development of the project during the past three years. Organized into three teams, one has focused on orientation and placement, a second focused on curriculum and instruction, and a third focused on the multi-media Learning Center. As a result, assessment and placement have been computerized, the curriculum has been redesigned, and faculty have developed new instructional methods emphasizing the use of multi-media materials.

Today, students are assessed and placed electronically using ETS' Computerized Placement Test (CPT) and advised into the developmental program through the design of their personalized learning plan. Thereafter, they enroll in a fully integrated developmental program as prescribed, including reading, writing and mathematics, as well as personal development. Each of the courses involved in the program has been redesigned to emphasize the development of outcome-oriented learning strategies in the disciplines with an expanded time-on-task orientation. Moreover, the success of the courses rests on the implementation of interactive instructional strategies designed to promote student involvement in learning.

Central to the program is the implementation of the Learning Center, a multi-media resource integrated with the curriculum. Students enrolled in reading, writing, and mathematics are in the classroom three hours a week, and in the adjacent Learning Center two hours a week, one with their peers and another on their own. Their work in the Learning Center is monitored electronically using Traffic Cop so that their instructors can assess the student's investing in their own learning. Faculty have developed curriculum guides and instructional resource manuals for each of the courses, and the Learning Center has developed resource materials to assist with the utility of the Learning Center's software which includes programs associated with student's texts, as well as other commercially available material such as Learning Plus, Skills Bank,

Encarta, and Bookshelf. Moreover, instructors have just begun to develop their own courseware with the ultimate intent of bringing multimedia directly into the classroom. A continuous training program supports the faculty and staff in working with the new program, emphasizing the use of the new technology, the development of facility with interactive learning strategies such as cooperative learning, and the utility of educational tools such as learning styles, critical thinking and problem solving strategies, motivational techniques, and student portfolios.

The result of this intense effort has been tremendous. First and foremost, students are enrolling in the developmental courses that will contribute to their overall success. Today, 90 percent of the new students are assessed and placed in appropriate levels of instruction and compliance with developmental course placement has increased to 80 percent, double the rate of 1990, producing a 17 percent increase in developmental program enrollment this year. Once enrolled, student involvement in learning has increased, both in terms of the time invested and in terms of the level of participation required. This increased student involvement through a curriculum focused on integrated strategies and skills has resulted in an 81 percent overall increase in student achievement across the program's four areas—reading, writing, mathematics and student success—as measured by course completion and a 47 percent overall increase in student persistence as measured by continued enrollment from the first to the second semester.

As the program continues to mature, increased emphasis will be placed on the continued development of the integration between the Learning Center and the program as well as faculty training and development. Through continued assessment, it is hoped that the initial success of the effort can be maintained and increased, thereby delivering on the promise of increased student learning and development.

ADAM in the Classroom

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Seminole Community College (SCC) is committed to the implementation of proven technological advances in education. As examples, almost all faculty have desktop computers linked to a college-wide network. On-campus training activities are numerous and varied, and have included PowerPoint and an introduction to Multimedia Toolbook. Several faculty members from various areas of the college were sent to the Institute of Academic Technology in Chapel Hill for advanced Toolbook training. SCC, with its partner institutions in the Central Florida Consortium of Higher Education, produced a 13-video series entitled "Beyond Chalk" to introduce faculty to a wide variety of technologies for teaching. This series includes a segment on the use of the Animated Dissection of Anatomy for Medicine (ADAM) in the classroom and is currently being used as the basis for a course being taught at Brevard Community College. The Public Broadcast System (PBS) has indicated strong interest in buying and airing this series.

With the enthusiastic support and encouragement of the Dean of Arts and Sciences, the Biology Department first obtained a copy of ADAM Comprehensive in the summer of 1994. The department was provided with a mobile computer workstation and projection equipment, and James Turner, Anatomy & Physiology instructor, was awarded release time to develop presentations for the class and lab. ADAM was first presented to Anatomy & Physiology (A&P) students the following Fall semester. It was an immediate success, enthusiastically embraced both by the students and faculty. As the lead instructor for this two-semester lecture/lab sequence, Turner admits to looking forward to certain topics (e.g., gross anatomy of the muscular system, blood vessels) that before had seemed tedious to teach and difficult to learn. The students reported that the ability to interactively view individual organs in depth, and in relation to adjacent structures was a vast improvement over traditional two-dimensional drawings and/or photographs, and that ADAM greatly supplemented their ability to relate cat dissections to human anatomy. Additionally, Allied Health students benefit from the ADAM program because it more closely simulates the actual health-care work environment.

In the summer of 1996, the original 486 computer was replaced by a Pentium unit, which vastly increased the effectiveness and speed of presentation. The original computer was donated to our Learning Center, and a copy of ADAM Standard was purchased. Beginning in the fall of 1996, students now had individual access to one copy of ADAM Standard, and copies of the three original ADAM Physiology units in the Learning Center. The Physiology programs also became incorporated into class presentations. The one computer with ADAM in the Learning Center receives high usage, particularly at peak times (usually near test times!), and there are often numerous students huddled near the computer.

Administrative support for multisensory approaches to teaching continues. For example, we are in the process of designing a new Science lab wing, and all labs are designed as smart classrooms for easy computer cabling to the instructor desk and all student stations. Each instructor desk will have a serial port for multimedia instruction, with links to the campus-wide system (including Internet access), and an integrated overhead projection unit, laser-disc player, VCR, and an audio system. Raceways are provided to allow for eventual connections to individual student stations. In addition, on both floors of the new wing there will be computer "valleys" adjacent to labs for individual student use.

While certainly not the largest of Florida's 28 community colleges, we are currently poised for and anticipating a period of rapid growth and expansion under the direction of a dynamic new president, in a region of rapidly expanding population and economy (Central Florida). SCC has a reputation of having one of the finest science and math programs in the state. We consistently receive reports from universities that our graduates are very well-prepared in their science backgrounds, and that they compete at least as well as, if not better, than "native" students, and typically better than transfers from other nearby community colleges. Our philosophy is that our students should be held to high standards, equal in rigor and content to that of the first two years of university training. We are prepared to provide whatever assistance we can to help ensure student success. Our advantages include much smaller class sizes than universities, a faculty dedicated to effective teaching, and an administration supportive of faculty goals. The effective use of quality multimedia teaching systems such as ADAM in Science and Health-care programs is an integral part of our goals and our vision of first-rate instruction.

Applied Mathematics in the AAS Programs

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Tech Prep is a program of study initiated throughout the United States to prepare students to enter the workforce. Many school districts in Arkansas have adopted two pathways for students in high school: Tech-Prep and College-Prep. Mississippi County Community College is the community college member of the Mississippi County Tech-Prep Consortium along with surrounding public school districts.

While researching Tech-Prep programs and the applied curriculum, it became evident that the non-traditional student would be at a disadvantage when placed in courses with the 18-year-old who had recently completed applied mathematics in high school. Mathematics at the college level would have to be transformed into a meaningful program of study that utilized collaborative learning techniques, manipulatives, and technology to complete mathematics laboratories.

After talking with area industrial plant managers and Business and Technical Programs faculty at MCCC, the basis of the curriculum was developed. The change in the curriculum is more than just a listing of different topics; the

teaching techniques have also changed. All of the activities in the classroom are accomplished by groups of four students solving problems as a team. In their groups, students discuss mathematical ideas; and in the lab report, each student writes mathematical ideas. For some, this is the first time mathematics has meaning and purpose.

The curriculum developed into a two-semester sequence of courses beginning with Applied Mathematics and then Mathematics for Business and Technical Programs. During the semester of Applied Mathematics, students learn to solve applications problems and work together in groups. Much of the content is familiar to them. The second semester begins with an introduction to statistics and probability, followed by trigonometry, applications of quadratic equations, systems of equations and inequalities, logic, and more. Each unit consists of homework assignments, one or more lab assignments, group activities, video, and a posttest. Scientific calculators, graphing calculators, spreadsheet software, graphing software, measuring devices (vernier calipers, measuring tapes, meter sticks, graduated cylinders), and manipulatives are all utilized in the classroom setting making each student aware of the mathematics in the world around him.

With the change in the teaching technique comes a change in the assessment of student learning. Students are given major in-class exams just as before, but also receive credit for what they have learned while doing homework and completing lab assignments. Some assessments are also used that do not count in the grade. Students complete an assignment together in groups, the assignments are graded by the instructor, and the group with the highest score receives a prize. Usually the prize is a pencil with the name of the school imprinted on it, but it becomes a symbol of success in math class. At the end of the semester, students not only take a written final exam, but also a lab final where they are expected to solve a problem given to the lab group.

The results of this curriculum have been fantastic! Non-traditional students who had flunked out of high school algebra become expert problem solvers. They see a reason for learning mathematics and they can hold it in their hands. Students who have graduated and are in the workplace say they use their math every day. The most important result, however, is the increase in confidence felt by the successful student. Because of this success, the syllabi for these two courses have been adopted, with little revision, by the Arkansas Department of Higher Education to be used as a model for the mathematics curriculum taught by Community and Technical Colleges in the Associate in Applied Science degree programs.

Brevard Community College Distance Learning
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The College has over twenty years of experience in the delivery of distance learning courses using a variety of instructional technologies and delivery modes.

Within the past 18 months, the College has established a "virtual campus" on America Online and launched a comprehensive distance learning initiative that enables students to complete online courses that meet the requirements for the A.A. degree in General Studies and ten A.S. degrees curricula.

In October, 1995, Brevard Community College launched its first "on-line" courses with a "virtual campus" on America Online (AOL) through a partnership with the Community Colleges for International Development (CCID) and the Electronic University Network (EUN). Since then, BCC has enrolled over 400 students. The on-line "virtual campus" provides access to every aspect of a traditional college, without buildings, classrooms, or a physical plant. BCC distance learning students have access to the full-range of student services and learner support services while taking courses and/or pursuing a degree-at-a-distance. Students are admitted, registered, and advised on-line.

In September 1996, BCC was awarded a comprehensive 3-year grant from the Fund for the Improvement of Postsecondary Education (FIPSE) entitled: "Faculty Transformation: The Key to the Virtual Campus." The project is an institution wide initiative to empower faculty to develop innovative and academically sound online teaching practices and to involve the majority of BCC's faculty in online instruction and in the activities of the college's virtual campus.

The "virtual campus" solution enables any college or university to establish a presence in cyberspace and to provide the highest and most personal level of interaction between faculty and student, and among students. In an age when both telecommunications systems and economies are globalized the "virtual campus" is also a *global campus*.

THE CASE FOR DISTANCE LEARNING AND FOR THE USE OF INFORMATION TECHNOLOGIES

BCC is responding to new societal trends. The rising intensity of a new wave of technology, trends in economic globalization, demographic changes and enrollments shifts, combined with the pairing of education and economic success are changing the marketplace, the workplace, and somewhat more slowly, even reluctantly, our colleges and universities. BCC is well aware of these trends and continues to lead other colleges and universities in adapting information technologies and distance learning delivery modes to better serve its varied and diverse constituencies and to address the new imperatives.

Demographic Changes and Enrollment Shifts - Adults -- typically defined as those persons 25 years of age and older -- are going to college in larger numbers than ever before. According to the College Board, the proportion of adult learners in higher education has been rising steadily, approximately from 30 percent in 1970 to 40 percent in 1980 and to 48 percent in 1990. By the millennium, the majority of students in higher education will be 25 years of age and older. Most adults are busy people juggling jobs, families, and studies.

Trends in Globalization - Today, production, manufacturing, commercial trade, and information have globalized in a telecommunications-rich environment that transcends national and geographical boundaries. As American businesses restructure to meet the demands of a global economy, American workers face a future in which they must continually upgrade their knowledge and skills -- or

learn new skills -- in order to remain competitive and to increase their earning power. In such an environment, American workers need to view education as a lifelong learning process, not as an "event."

Pairing Education and Economic Success - The labor markets are changing and will continue to do so. However, the imperative of a knowledge-based world economy dictates a new philosophy recognizing that our entire population needs to be empowered to be as knowledgeable, competent, and inventive as the people of any other nations. The loss of jobs, the changing of jobs, and the creation of new ones are the catalysts that sent adults back to college. In general, working adults are motivated to learn by workforce or workplace demands, and, in a society that relies heavily on credentials, learning power is intrinsically associated with earning power.

New Wave of Technology - At present, cable operators, telephone companies, direct broadcast satellite providers, and legions of technology leaders are all investing heavily in the development of high performance telecommunications links to the home and the workplace while simultaneously advocating the creation of networks for the delivery of educational programs and services. Computers and telecommunications networks are shaping the design and the landscape of the workplace of the future. In the period of 1989 to 1994, the number of individuals who telecommute to work has almost tripled from approximately 3 to 9 million. By the year 2000, there will be nearly 25 million telecommuters and two-thirds of U.S. workers will be "knowledge workers" engaged in America's knowledge-based economy. As our society continues to transition into the information age, we approach a new era of computing in which the advances in technology and the goals of education align so closely that we have an unprecedented opportunity to change the way we think and learn.

A Focus on Degrees-At-A-Distance - According to the College Board, 60 percent of adult learners are degree seekers. Yet, until recently, very few colleges offered adult learners the opportunity to complete an entire degrees-at-a-distance. In Maryland, a State Board for Community College longitudinal study of the statewide cohort of entering community college students, in academic year 1985, revealed that adult part-time learners require, on average, nearly six years to complete the coursework for a two-year degree. Given these circumstances, it would take a part-time student almost 12 years to complete a bachelor's degree. In addition to time-to-degree solutions, higher education must redefine "access" from access to individual courses to "access-to-a-degree." Hence, higher education needs to adopt new core values that reflect the needs of society's new imperatives.

New Core Values - To excel in the 21st century, higher education must undergo a paradigm shift from an environment and culture that has defined learning as a "classroom process," shaped by brick-and-mortar facilities and faculty-centered activities, to an environment defined by "learner-centered" processes and shaped by information technologies and ubiquitous asynchronous access to subject content material, learner-support services, and technology-literate resource personnel.

Distance learning and information technologies can accelerate time-to-degree and facilitate access to degrees by removing the obstacles of place- and time-dependence associated with most learning strategies.

The Carrot or the Stick: Inspiring Faculty to Create Internet Courses

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"Internet" and "ubiquitous" are two words which go hand-in-hand in our world of 1997. Whereas three short years ago the dream of an information superhighway connecting homes, businesses and schools was still just a dream, today an Internet connection is as commonplace as to us as microwave ovens, cellular phones, and digital pagers.

Education has long realized the value of having an easy connection to an untold wealth of information in an electronic format, where students can quickly and easily gain access to the latest world-wide information from as close as their desktop. And now education has quickly learned that just as the Internet is the means for acquiring research information, the Internet can also serve as the medium for delivering that information as well. Few schools today have not at least thought about how they can use the Internet to deliver course material to students anywhere in the world.

The problem, however, is not the technology, but rather how do you train and motivate a faculty to develop these new Internet courses? What can be done to provide them with the energy to translate their traditional lecture-bound presentations into slick multimedia adventures on the World Wide Web?

That was the dilemma facing Volunteer State Community College (VSCC). After discussion with faculty and administrators, VSCC has embarked on a program to identify and provide those faculty with the tools to create Internet and multimedia applications through an on-campus grant program.

As a public two-year community college located just north of Nashville, Volunteer State serves a twelve-county region in northern Middle Tennessee. Through the 1980's VSCC, like many institutions, struggled with small enrollment increases and budget cuts. And like many institutions funds for technology equipment were simply not made available.

Yet change was in the wind. In 1991 a new Chief Academic Officer brought to campus an understanding of how technology can improve teaching. A six-month comprehensive study was commissioned to identify the problems and recommend solutions. The members of this committee, made up of faculty, students, staff and industry representatives, immediately targeted the lack of computer equipment as the major problem and recommended a plan to purchase computers for all faculty, increase the number of student labs, and upgrade networking and telecommunications facilities both on and off campus.

However, the committee soon realized that purchasing equipment was not the solution to the problem. There must be an infrastructure in place to support the new equipment, in terms of training and continued support.

From this realization was born the Faculty Training and Development (FTD) Center. The vision was to provide an environment in which faculty would feel free to come learn about computers and technology in a comfortable environment. Training sessions would be scheduled for the entire semester for staff to attend. Also, a process to supply on-going support would also be implemented.

The FTD was started in the fall of 1992 with two computers in a converted faculty office and a full-time trainer. Needless to say, there was room for improvement! Twenty new 80486 computers were purchased for faculty members that fall. Those faculty who wanted a computer submitted a request. As part of the agreement for receiving a computer the faculty member had to agree to attend at least five training sessions at the FTD each semester.

The construction of a new library/learning resource center provided a new home for the FTD in 1994. A large, spacious area on the second floor of this new facility has provided the space for twelve microcomputers (all networked), scanners, color printers, and the latest in multimedia equipment and technology.

With the infrastructure in place for faculty training and equipment, the next step was to enlist faculty to produce Internet and multimedia presentations. After discussion with faculty and administrators, VSCC has embarked on a program to identify and provide those faculty with the tools to create Internet and multimedia applications through an on-campus grant program.

In late Fall of 1996 a special memo went out to all faculty regarding the grant computer program:

> *SPECIAL GRANT COMPUTERS*
>
> *In addition, this year we are proposing to purchase five (5) high-powered computer systems for faculty who will go "above and beyond" in computing. This will be structured like a grant, with faculty submitting competitive proposals.*
>
> *A faculty member who wishes to receive one of these special units must actually produce an advanced multimedia presentation (not Powerpoint) for an entire VSCC course, an entire Internet-based course, or similar project. They must also be willing to attend required regular special workshop sessions in the Faculty Training and Development Center during the length of the project. At the end of the grant period the presentation will be demonstrated to the VSCC faculty in a special session.*
>
> *Only those faculty who are seriously interested in creating special projects by investing large amounts of time should submit a grant proposal. If a faculty member fails to live up to the conditions of the grant the computer can be replaced.*
>
> *The faculty will be asked to submit their grant proposals directly to the Academic Computing Committee (and not to division chairpersons). The Committee will review the proposals and award the computers.*

We were unsure of what the response from the faculty would be. Would anyone nibble at the proposal? Would there be a flood of requests? Would there be any at all?

By the deadline there were five faculty members who were interested in producing Internet applications. High-powered multimedia computers with prodigious amounts of RAM and hard drive space, video recorder cards, and the latest software were ordered. At the initial meeting the ground rules were discussed, which included:

- Deadlines for course development
- Bi-monthly progress meetings
- Required training sessions
- Presentation of applications at Fall Faculty In-Service

Today the training has started while the computers are being shipped. The VSCC Training and Support Specialist and VSCC Webmaster are both heavily involved with the faculty. Course outlines and content are being constructed. Analysis of other Web sites are being reviewed.

The goal of the program is to both produce Internet multimedia applications and entice the other VSCC faculty, through the offer of high-powered technology as well as peer influence, to "jump in" and see how they can create multimedia Internet applications. So far, it is working well.

Computer Distance Learning Project
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In order to reach an increasing number of students in spite of the depressed financial state of higher education, Seminole Community College (SCC) has developed an innovative approach to educating students in the area of computers. SCC is using the Internet and e-mail to deliver instruction in three different computer courses in the Business Technologies Department. The "college student" of the past looks quite different than the "college student" of the twenty-first century. This new breed of student also has different needs. Distance learning technologies provide a means of dealing with the changes in demographics, workplace, and educational funding. Distance learning also offers a method of reaching more students by accommodating a varied of learning styles. Furthermore, the classes are not time-based or place-based and can accommodate today's college students who are often employed, adults, or female students with children.

Picture this scenario: A student sits at home using his home computer which must be equipped with a modem and the required software for the course he is taking. By the way, the software may be purchased in the SCC bookstore at an educational discount. The course syllabus, calendar, assignments, lecture notes, and solutions to problems are all available via the SCC home page. The student attends a required orientation to meet with the instructor who reviews the course requirements and answers questions regarding the delivery method. Lecture notes are reviewed and assignments are completed at times convenient to the student, rather than times convenient to the instructor. This is definitely a student-centered rather than a teacher-centered learning environment.

Marketing: The distance learning computer courses are advertised in the SCC Spectrum with a caption stating the hardware and software requirements along with the date and time of the mandatory orientation. Counselors are provided information concerning the type of student who should enroll in a distance learning course. The student must be mature, self-motivated, and enjoy working at home. These courses aren't for everyone.

Registration: Registration for the distance learning students is the same as for regular students. These courses require the traditional lab fee to help cover the cost of the Web Page and assistance from the Instructional Technologist.

Lectures: All lecture notes are placed on the Web page. Notes are organized according to subject or chapter and linked to the lecture materials. Students may read the notes on the Web page or print out the notes and read the hard copy.

Assignments: Assignments may be delivered via e-mail, fax, or postal service. The student's completed assignment may be sent back to the instructor as an attachment to an e-mail message. The attached file is graded and the results including feedback are returned to the student using the reply feature of e-mail. Using this approach, the student does not have to copy the completed assignment files to a disk and/or submit a printed copy of the completed assignment. Likewise, the instructor doesn't have to take the disk to a computer, load the software, and load the file from the student's disk to grade the assignments. Using the features of e-mail software, the attached files are immediately opened and evaluated using several clicks of the mouse. No paper work, no disk handling, and no manual intervention is required!

Testing: Quizzes are delivered by the instructor on-line and the students respond to the quiz questions via e-mail. Quizzes are graded and returned to the student on-line along with instructor comments regarding incorrect answers. At this point in time, testing takes place on campus. Depending on the course, students may come on campus to take two, three, or four examinations. The instructor administers the exams at specific times in a computer classroom. However, a networked computer has been installed in the Makeup Testing Center so that students have the option of taking an exam at the Center during a one-week window in the event it is not convenient to take the exam with the instructor. For the student who cannot come on campus at any time, specific guidelines for obtaining a proctor have been developed. These guidelines are available via the Web page and the student must assume any costs incurred by hiring a proctor.

Communication: Communication between the instructor and students is via e-mail. The instructor sets up a group e-mail for each course to send

correspondence to the entire class. Students are instructed to set up a group e-mail within their home e-mail software to make it easier to deliver a question or comment to the whole class. If a student is having a problem with a specific case study, he may send a group e-mail to the class and instructor. Anyone in the class may answer the question. Another student may have the same question and will read the e-mail to get the question answered.

This type of communication may also take place with a listserv. A listserv will be set up and piloted for the first time during one of the classes this semester. Students will subscribe to the listserv, the instructor will be the listserv owner, and the communication being done by group e-mail may be better handled by a listserv. The first distance learning class attempted to use a newsgroup, but this approach has been put on hold while we explore using a listserv.

Summary: Student evaluations to date have been very favorable regarding the distance learning courses. This instructional project is increasing student access to computer courses by providing an alternative delivery method and flexible times. Further, this method of instruction will allow SCC to remain competitive with area colleges and compete in a global market with institutions offering courses world-wide. Hopefully, these courses will provide a model for and encourage other departments at SCC to offer courses via distance technologies.

College-Industry Partnerships to Enhance Instructional Technology

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The Brazosport College Chemical Technology program is designed to serve the local community and industry by developing and supplying a technically prepared workforce of chemical technicians for the chemical industry in the areas of both laboratory analysis and process operations. This is accomplished through a quality, industry-driven curriculum providing both strong academic instruction as well as hands-on practical experience using current technology found in the types of plants that are typical in our area.

In addition to the standard courses and laboratories in general and organic chemistry, an industrial chemistry course has been developed with a laboratory of analytical instrumentation including gas and high performance liquid chromatographs, total organic carbon analyzers, autotitrators, and infrared, ultraviolet, and atomic absorption spectrophotometers. Also, with the input of our advisory committees and through the generosity of instrumentation and equipment vendors along with major donations of engineering and supplies from local chemical manufacturers such as Dow and BASF, a group of six pilot plants were constructed on our campus which mirror 90 percent of the major processes used in the chemical industry.

Although most of the process chemicals used in the pilot plant lab are relatively non-toxic and are handled in small amounts, rigid safety and work rules are

employed to reflect the best examples of workforce safety training. The plants were carefully designed for environmental safety. A variety of technology is used in the six plants. Control systems include electronic, direct digital and pneumatic controllers. Representative equipment includes programmable logic controllers, ratio controllers, adaptive gain controllers, "smart" transmitters and on-line gas chromatography. This laboratory helps train chemical technicians in pilot plant operations, including sample analysis, collection and data evaluation. It provides training for instrument technicians in the physical layout of control loops, as well as troubleshooting and maintenance of equipment. It also trains plant operators in general plant operations and safety, process control and troubleshooting.

Students in this program also participate in an internship program whereby they can work in industry as chemical technicians under the collaborative supervision of both industry and college staff. They work twenty hours per week for two semesters and receive six hours of college credit.

The local petrochemical industry depends on the college to provide a large part of their employee training of process operators and laboratory analysts. The chemistry department works closely with the training supervisors at such companies as Dow, BASF, Monsanto and OxyChem to provide flex-entry customized courses on our campus specifically designed to address the companies' training needs.

We have made agreements with neighboring community colleges to ensure that similar coursework taken at their institutions will freely apply to our degree and certificate programs if their students wish to transfer here to utilize our unique facilities to complete the capstone portion of the chemical technology program. Our faculty have also been actively involved with the American Chemical Society and the University of Cincinnati in the ongoing work to develop a Center for Advanced Education in Chemical Technology which would offer support for curriculum development, instructional materials development, and faculty development. A particularly important part of the Center's work would be to focus on the development and nurture of "local-alliances" which we have found to be a vital part of our own program.

Our chemical technology program offers an outstanding example of an effective partnership among industry, business and education, with each participant making a strong contribution in its area of expertise. Industry providing the engineering, advice and construction; business contributing the most modern technology and the best ways to use it; and education responding by designing and providing the best, most efficient training and educational programs to meet the local needs for the foreseeable future. The synergy that has developed from this partnership has yielded the best product available for all the participants enabling us to provide a safe, productive work force of skilled, dynamic technicians.

Connections for the Future: A Collegewide Technology Initiative

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Computer technology is an essential tool for higher education today. This is especially true for small, rural institutions such as Iowa Lakes Community College. Located in a remote area of northwest Iowa, the college enrolls approximately 3,000 students in liberal arts, technical, and continuing education programs. These educational offerings are provided at two main campuses, three educational centers and a community education facility spread throughout 2,900 square miles of farmland and prairie.

Iowa Lakes' ambitious $3.6 million Technology Plan is a cornerstone of the college's plan to improve curriculum and student outcomes. The initiative enjoys widespread support from the Board of Trustees and college President to the student body, the latter of which agreed to underwrite a portion of the costs through a per credit technology fee. As a result, the college was able to integrate a state-of-the-art computer network infrastructure into facilities, collegewide, within a relatively short time span.

The college has not always offered students and faculty a technology-rich environment. Not long ago, Iowa Lakes' computer resources were outdated and offered limited accessibility for students and staff alike. Many students entering the college experienced a higher level of technology at their local high school or in their home than the college could provide in campus labs and classrooms. Many PCs were 386 models or older and networking was limited to a few units in campus computer labs. Compatibility between systems was a problem causing software and maintenance costs to soar.

Faculty did not have adequate computing resources to utilize technology in their curriculum. Classrooms needed to be mediated in order to efficiently integrate computer technology in the curriculum and provide faculty with standard presentation equipment necessary to utilize today's teaching materials. Finally, Internet access, multimedia capabilities, and student productivity were limited.

To respond to needs of both students and faculty, Iowa embarked on a modular format to implement the initiative. The first priority was to solve problems resulting from a lack of software and hardware compatibility and connectivity, and to transform the college's low-tech image.

Standardizing hardware was an important first step. This facilitated the use of common applications to share student records and financial information. Previously, the college utilized supporting systems from a variety of vendors, many of which were not compatible with each other. The college looked at IBM and Hewlett Packard proposals; but partnership with a single vendor made the most sense given the constraints of limited budget and staff and the many remote areas which needed to be served. Iowa Lakes selected Compaq for an end-to-end solution including PCs, file servers, and network controllers, repeaters and

switches. The single vendor solution minimized maintenance, technical support, and inventory concerns while ensuring hardware and software compatibility.

To improve student productivity and enable easy Internet access, the college upgraded desktop resources by purchasing more than 300 pentium PCs for classrooms, computer labs, and faculty and campus of officers. Each PC has a Compaq Netelligent 10/100 Controller which automatically detects network connection speed and adjusts accordingly.

Compaq Proliant 5000 servers with more than 40 gigabytes of disk storage were installed at the two main campuses. Installing these high-capacity servers, rather than several smaller ones, reduced the potential for system failure and increased cost efficiency.

Meanwhile, a state-of-the-art network infrastructure was created from the ground up, including *Fast Ethernet local area networks (LANs)* at each of the six college locations and a wide area network (WAN) to interconnect the LANs. The WAN uses the Iowa Communications Network, a fiber optic network connecting educational facilities at all levels across the state. A fiber backbone is necessary to cover the distances between buildings, but also allows the college to incorporate higher speed networking technology advancements of the future.

Fast Ethernet has given Iowa Lakes' network the power to succeed on many fronts. And to ensure that faculty and staff have the tools to fully engage the new technology, the college provides an extensive in-house training program for all staff. Numerous mini-courses are offered each semester through the staff development office. This comprehensive approach, integrating technology upgrade and staff training, has maximized the initiative's success.

Faculty have achieved their goal of sharing information with students and other faculty members across campuses. At the administrative level, the network provides standardized software applications that are shared across the network to improve productivity and save money.

Students may be benefiting the most. At the desktop, response times have improved dramatically, allowing class time to be spent in more productive ways. All students have access to timesaving applications such as e-mail and Internet. And through the college's home page on the Internet, they may check out library books electronically, access course syllabi and class assignments, and participate in course listservs.

Just as importantly, Iowa Lakes can offer state-of-the-art applications to current and future students which will help us compete effectively now and in the future. Many classrooms are now fully mediated with hardware which support a variety of exciting educational tools such as multimedia and video conferencing. Best of all, the infrastructure is designed to incorporate future high-speed networking technologies without a large-scale replacement of equipment.

Distance Interactive Learning
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A 25-member collaborative community has been formed, with Kellogg Community College as its developmental hub, to provide new educational opportunities for high school and college students across Calhoun and Branch Counties in Michigan.

This innovative interactive learning system is being funded through a grant from the W. K. Kellogg Foundation as well as individual contributions from one K-8 school district, 15 area K-12 school districts, two high school vocational centers, a private non-profit child care institution, two intermediate school districts, two private four-year colleges, a public Michigan university and two campuses of Kellogg Community College, a public two-year college.

DIAL (Distance InterActive Learning) is an "interactive fiber optic highway designed to improve the quality of formal and informal educational opportunities for youth and adults" across two counties. The system moves voice, video and data among the consortium members. Along with shared distance interactive learning courses, when fully operational, the system will also provide for student and staff enrichment activities, staff development programming, information and data distribution and retrieval services, and the expanded use of Internet.

There are several interesting aspects to the DIAL system, including the use of innovative teaching methodology being used to take full advantage of the system's capabilities. Certainly equally as interesting is how this consortium of 25 necessarily parochial institutions has come together to make this new educational opportunity available to students of all ages in three counties in south central Michigan using 165 miles of fiber optic cable.

The original concept for the system came from a visionary dream of two local individuals. That dream was developed through the preparation of a grant request to the Kellogg Foundation. The group that did this included educators from the college level, the high school, middle school and elementary levels, industrialists, technicians, and other community representatives.

Once the grant was received, the first thing that had to happen was for each of the 25 participants to commit to a shared vision with the good of the system taking priority over individual issues. Committees were established to determine policy, handle scheduling and local site planning and implementation, work on staff development and then plan for the implementation of the entire system once the various technical aspects of the operation had been designed and constructed.

The Calhoun Intermediate School District accepted responsibility for serving as fiscal agent for the foundation grant and the initial and annual fees required of each of the involved parties. A policy advisory committee was then established which included the Calhoun ISD superintendent, community college president,

four superintendents from large schools (2,000 or more students) in the consortium and four from the small schools, the Uniserve representative from the Michigan Education Association, an individual representing the various specialized members, and the Branch Intermediate superintendent who represented the two area vocational centers. It is planned that representation will revolve so that as the consortium continues all members will have an opportunity to serve.

Kellogg Community College was given overall responsibility for staff development, with the Calhoun ISD providing technological support and maintenance for the system. The group drew upon the expertise of Indiana University, which also has a Kellogg Foundation grant to support the development of new distance learning programs that feature the integration of innovative instructional strategies with new technologies.

Additionally, an evaluation team was set up by the Foundation to provide objective oversight of the process. This group, led by consultants from Michigan State University and Western Michigan University, includes parents, students, instructors, administrators, project personnel.

A committee of principals from the various local high schools was established to take on the issues of course selection and scheduling and to develop procedures for handling local site implementation. This has proven to be an excellent communications tool for a broader group of principals who had not previously been in a position to collaborate on a recurring basis.

This group has determined courses to be offered on the system, has proposed potential teachers for the system and is working on the challenges posed by different types of block scheduling in the various school districts as well the local ramifications of the institution of a new system in which not everyone is involved within an already established overall school program.

Those instructors at both the high school and college levels who have either volunteered or been proposed for work on the system have displayed remarkable creativity in their approach to their instruction on the system. In spite of predictable apprehensions, their enthusiastic commitment to the potential of the system has helped them deal with the challenges they encounter with the new technologies.

One of the benefits of the system has been to create a kind of "cross pollination" of ideas for instruction with teachers from different disciplines and districts, learning new strategies for dealing with a diversity of students and communities, ultimately providing a richer personal and educational experience for all students involved.

Exemplary Initiatives Awards Competition
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For the past two years Martha DePecol Sanner has been involved in an initiative to encourage other educators to consider adopting multimedia instructional techniques. She has given a series of about twenty presentations, which dramatically illustrate the effectiveness of this teaching tool, to professors, middle/high school teachers, and those involved with distributing funds for multimedia equipment. In addition to addressing her colleagues at Middlesex Community Technical College and other colleges within the Community-Technical College system in Connecticut, she has also presented to groups of biology professors in New York, Oregon and Kentucky. Her demonstration shows the effectiveness of the use of CD-ROM and laser disk in the classroom in the context of a "multimedia tour through the human body". She has also given several workshops which allow instructors to explore interactive CD-ROMs.

In Professor Sanner's Anatomy and Physiology classroom, she uses laser disk and CD-ROM as a presentation tool on a regular bask. In addition, her students perform about 70 percent of their laboratory work on computer. This includes computer-assisted dissection of a virtual cadaver, use of interactive microscopic images, and interactive CD-ROM physiology software. During the 1995-96 academic year she used a combination of traditional (dissection and actual microscope use) and interactive multimedia techniques in her laboratory. At the end of the school year her students evaluated the two approaches and overwhelmingly agreed the multimedia approach was the most effective. The results of this survey were presented at the national Human Anatomy and Physiology Society (HAPS) meeting in Oregon last June (1996).

Professor Sanner has also written a number of instructional materials designed to assist other professors in the use of educational multimedia software in biology. Many of the educational CD-ROMs on the market are fun for students to "play around with" but to actually use them in a laboratory situation requires the student to follow specific directions, which are often not provided with the software. She has written a lab manual to accompany a Cell Biology and Genetics CD-ROM, which she uses in a distance learning course she teaches through Charter Oak College allowing students do their labs on their home computer. She has also written extensive directions for the use of the dissection software and physiology software used in her own labs at Middlesex. These laboratory directions were distributed the HAPS meeting last June and some will soon be on the World Wide Web for educators and students to download and use. A review of her work was published in the Technology Integration Tool Kit for ADAM and Benjamin/Cummings Interactive Physiology and distributed to Anatomy and Physiology educators across the country.

In addition to serving on two Technology Committees within the Connecticut Community-Technical College System, Professor Sanner is also chair of the Technology Committee of the Human Anatomy and Physiology Society (HAPS). She has developed a comprehensive list of software available for anatomy and

physiology students which will be distributed at the HAPS meeting this June (1997) and also be placed on the HAPS Web site. She receives inquires from colleagues across the country concerning technological issues in teaching Anatomy and Physiology. Educators from other colleges have also visited her on the Middlesex campus to inquire about the tools they need to incorporate technology into their programs. In addition she keeps an ongoing dialog with the vendors who supply the software to learn about new developments.

Professor Sanner is interested in the development of educational CD-ROM products and has worked with two teams of professors from across the country on the scripts for two interacting physiology CDs. In addition, she critically reviews chemistry and biology educational software. She has also developed anatomy coloring book exercises for her students using modified anatomy clip art and graphics programs. She has presented this work at two national HAPS meetings.

Martha DePecol Sanner is excited about the future of technology in education and is sharing her enthusiasm and expertise among educators both locally and nationally.

Faculty Professional Development for Interactive Video Instruction

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In the fall of 1995, Northwestern Michigan College opened the NMC University Center in partnership with twelve of Michigan's public universities and private colleges. Through the University Center, 40 baccalaureate completion, master's and certificate programs are offered for residents of rural northwestern lower Michigan who are geographically isolated from baccalaureate and advanced degree-granting institutions.

One of the unique features of the NMC University Center is the delivery of courses via interactive video technology (ITV). From the partner institutions home campuses across the state, courses are sent to NMC via compressed video. Additionally, NMC is connected to the 16 area K-12 school districts in the surrounding five-county service district making it possible to bring University Center programs to students at their local high school.

The success of NMC University Center students is dependent upon the teaching success of the faculty, technical expertise of staff and knowledge and understanding by students. Within the interactive video system, there are instructional techniques that are currently unfamiliar to most students and faculty. The use of instructional technology to enhance the learning process and to make distance education students an integral part of the instructional process requires specific skills. Faculty professional development beyond the technical training - sometimes by vendors of equipment - is not necessarily a requirement for teaching an ITV course at many institutions of higher education. However, in

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any delivery methodology, student success and satisfaction with a course can be linked to instructor proficiency.

Northwestern Michigan College has designed and implemented a comprehensive human resource development program to provide that faculty from NMC, the University Center partners and the K-12 systems will be successful in the delivery of courses via ITV; that all staff and site facilitators have the specific expertise to provide the optimal learning environment for students and that students have the knowledge and tools necessary to have a successful educational experience via ITV.

The key components for faculty professional development at NMC are:

- Training workshops (2 - 3 days) that cover instructional techniques for being effective and successful on the system. Training topics include organization, involvement/interactivity, humanizing the course, effective use of visuals, handouts, presentation skills, technology in the classroom, and logistics of the network.

- Individual course development begins after the faculty have attended the training session. The faculty member and the instructional designer work as a team to address such issues as "chunking" the content, sequencing activities, matching strategies with objectives, alternatives to lecture, ways to visualize tough concepts that don't seem visual, using interaction effectively, using more or different ways to engage learners and keep them active in the learning process, selecting and creating appropriate exercises or practices, building good assessment tools. This is all done based on the specific content and goals of the instructor.

  Because this is a visual delivery medium, instructors also enhance their presentations utilizing graphics, still images, videotapes, slides, and computer images. Faculty learn to utilize small group discussion at all sites to encourage student-student interaction. Cross-site groups are also possible, so students likewise become involved with students at other sites.

  Faculty are trained in providing their lectures via alternative media such as multimedia, the Internet, etc. This allows them to spend some of the actual interactive class time on a higher plane, involving students in thinking about the ideas and concepts presented, reacting to, and applying information. NMC faculty are also provided with information on how to create a detailed syllabus, providing substantial print support for all students. They are also trained in techniques for information mapping, concept mapping (or word pictures), and guided note-taking. All of these provide further support for students, alternative "channels" for the distribution of information, as well as ways to engage the students through working with the course content.

- Peer colleague dialogues are used to provide faculty and staff with the opportunity to chat with others in the state regarding distance education issues. These dialogues are usually discipline specific: for example, Psychology instructors from several Michigan community colleges will participate via the interactive video network to discuss pedagogical issues in their areas of expertise.

- On-site visitations are provided to faculty to extend their knowledge base of distance education by providing financial support to attend national and regional conferences.

The staff (administrators, counselors, support staff) and site facilitators of NMC and the University Center and K-12 school districts are critical links to the students. They can provide direction and introduce students to the distance education system. A component of the NMC training program provides these critical "first-line" personnel with accurate information to use when assisting potential and current NMC University Center and K-12 students. The training sessions are offered semi-annually and include information on review of the system operations, how a class is conducted over the network, hands-on experience with the technology, and trouble shooting practice.

Finally, to help ensure that students have an optimal experience as "distance" learners at a remote site classroom, NMC has developed a student orientation video to orient students to this different educational delivery method. The video is shown during the first day of each interactive video class and includes information on what technologies are in the classroom and why, how the student can interact on the system with instructor or other students, how the student can make the best use of the teaching/learning strategies as well as some directions on what to do if there are technical difficulties.

In general NMC faculty who are provided with training and course development assistance feel that these activities were very helpful and were positive about the experience. Additionally, a significant majority (88 percent) of students rated their instructor very highly and were satisfied with their experience.

Incorporating Technology in the Delivery of Instruction
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In October, 1994, Rockingham Community College located in Wentworth, North Carolina, received a five-year grant under Title III of the Higher Education Act. One activity under the grant focuses on improving the college's curricula by expanding technology and distance learning opportunities over the five-year period. During each year of the grant, faculty from three programs each choose a different course to develop utilizing multimedia teaching methods.

To achieve this objective, the college installed a fiber optics communications and network backbone throughout the campus. This backbone allowed for the networking of faculty offices and classrooms. The college has also provided staff development to help faculty members develop and expand their knowledge of multimedia and electronic teaching methods. Faculty members were provided with the opportunity to attend live and taped teleconferences on topics such as modem-based education and distance learning. They were given workshops and individualized training including six-hour courses in Windows® and PowerPoint®.

The college also installed a complete multimedia computer system and developed a resource area for faculty to develop their own multimedia presentations.

The faculty members chosen for the training were given a laptop computer and were expected to convert a portion of one of their courses to a multimedia electronic format utilizing the latest in presentation authoring tools. They then incorporated the multimedia approach into their teaching and conducted an evaluation of the method. During the first year, Microcomputer Systems Technology and Accounting were chosen and presentations were developed. Part of the Introduction to Computers course was converted and taught in the Microcomputer Systems Technology program and part of the Business Law course was converted and taught. Students rated the courses highly in their evaluations and the faculty members were quite positive about the effect this change made in student learning and their abilities in the classroom.

The first year's successes also served as a catalyst to increase interest among other faculty members to become involved in the project and many students to take other classes offered in the same format. Also the faulty members who were involved in the project have gone on to develop other multimedia lessons and one instructor, who was technology illiterate at the time the project began, is going to offer an interactive course on the Internet in the 1997-98 school year.

In the second year of the grant, the college extended its variety of staff development programs to expand faculty members' knowledge of distance learning and multimedia teaching methods. Two two-hour hands-on workshops were offered to faculty and staff on the Internet. Individualized multimedia training was offered to interested faculty members. A videoconference on "Multimedia Fair Use Guidelines" was also presented as well as a six-hour training workshop on Windows 3.1®.

Three curricula were selected for conversion to multimedia: Business Administration, Paralegal, and Practical Nursing. As in the first year, laptop computers were purchased for the instructors' use. In Business Administration, the Introduction to Spreadsheets course was fully converted to multimedia presentation format and was enthusiastically received by the students. In the Paralegal program, the Income Tax course was converted and also received high praise from the students. In the Practical Nursing program, the instructors developed a multimedia presentation to facilitate their review for the licensing examination. This was also quite successful.

As the college increases its efforts, courses in three additional programs are being converted to multimedia. The programs are Surgical Technology, Child Care Worker/Teacher Assistant, and the College Transfer program. Nine faculty members were given an opportunity to attend a workshop entitled "Emerging Technologies for Educators." In addition, further staff development programs have been presented to familiarize faculty with multimedia applications and the Internet.

Additionally, the college has constructed a multimedia classroom/studio to facilitate the videotaping and Internet access by students via the campus-wide network. Last year, the college's telecourse enrollment was up by more than 200 percent RCC went from a ranking of 26 among the 59 community colleges in the North Carolina System to be ranked tenth. The lab is equipped with laptop

computers provided through a Tech-prep grant with an objective to help to prepare the public school faculty to utilize the Internet. In future years, additional coursework will be developed throughout the myriad of RCC's programs with a goal of giving students in all programs the exposure to multimedia in their classrooms. The college continues with its goal to "increase the availability of current technology to faculty, staff, and students."

Information Skills Guarantee
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Recognizing the vital importance of information skills in the academic arena, the workplace, and in our everyday life South Suburban College guarantees the information skills competency of all students graduating from SSC with an associate degree.

The first step was to develop the Academic Computer Information Local Area Network (ACILAN). The ACILAN provides easy access to information resources and networks at convenient points-of-service throughout the campus. It is clear that this information/resources centered learning strengthened the instructional program and developed an information sensitive institutional culture.

Simultaneously, step two initiated an information skills faculty development program. This program assisted the faculty in developing their own information skills and integrating the program in their instruction. The program used: worksessions at faculty development days voluntarily attended by over 50 percent of the faculty; hands-on worksessions during the academic year; discourse and dessert informational sessions during the academic year; hands-on, in depth summer worksessions; area and departmental worksessions; collaborative worksessions with the entire English faculty, and faculty attending instructional skills sessions for their classes. The outcome of this training was an information-sensitive and skilled faculty who acted as peer mentors for their faculty colleagues.

Step three developed a multi-level skills development process:

Developmental Level:

Orientation for College Success - Introduction to career, occupational and further education information;

Developmental English - Remove library/information anxiety, pre-searching skills, basic searching skills, introduction to SSC Library and magazine/newspaper information resources;

Level One:

English 101 - Session 1: Computer Lab - Navigating the ACILAN, subject and keyword searching, subject, author, title searching, subject tree searching for information;

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Session 2: Library - Searching CD-ROM information, searching government information, introduction to searching the INTERNET;
Session 3: Library or computer lab - Students work on specific class assignment with assistance;

Level Two:

English 102 - Researching skills - Research strategies and techniques, Boolean searching, researching the World Wide Web, researching information specified by instructor;

Level Three:

Discipline Specific - Researching skills - Career and subject specific information researching strategies and techniques.

Success of the information skills instruction is measured by outcomes assessment built into the sessions themselves. A random sample of English 102 students will be given a information skills assessment along with their outcomes assessment for writing skills. Finally, each instructor who schedules an information skills session will be asked to evaluate the effectiveness of the session(s) in relation to his particular class and needs. The information skills program will provide every student with three or more information skills sessions. The core of the program is the English 101 level because every English 101 class has these sessions built in and every student at South Suburban College must take this class. Skill sessions are built into specific classes so that students see the relevancy of skill development and have an opportunity to use these skills in an actual situation. On this basis SSC will guarantee that its graduates possess the necessary information skills for success in their careers and/or further education in the Information Age.

The Integration of Technology to Enhance Teaching and Learning

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Pueblo Community College adopted the major goal of integrating technology into all phases and learning in order to better serve the needs of students and the businesses who hire them. This all-campus technology thrust has five different strategies associated with it:

Strategy One - Establish the Center for Teaching Excellence

The first strategy is the establishment of the Center for Teaching Excellence (CTE) which is staffed by a full-time Instructional Staff Developer and houses state-of-the-art multimedia computers and all of the peripheral equipment and software necessary for total immersion and authoring of multimedia, telelearning, and internet delivery products. This action is also characterized by an effort to identify and acquire high quality, commercially available software and CD-ROM programs in a wide variety of disciplines. The CTE offers a full range of faculty development

services including workshops, seminars, credit courses, course development, and teaching assessment/consultation. This year, the CTE is sponsoring a competition whereby faculty may apply for funds to development and implement technology-related curriculum projects. These funds are used to pay for released time for faculty, to purchase existing multimedia packages, and to produce new media. The CTE was opened in the summer of 1996 and is fully operational.

Strategy Two - Provide New Multimedia Hardware and Software for Faculty and Students

New multimedia computers are being purchased and installed in the offices the majority of full-time faculty, and also in the open labs for student access. All of these computers have audio and video capability as well as providing access to the internet. Faculty are provided with numerous, flexible opportunities to learn new computer applications skills by attending credit courses and workshops, or by working through self-instructional modules in the CTE. Students learn new computer skills offered in credit courses by a wide variety of disciplines and in open labs staffed by lab assistants. All new computers are IBM compatibles and feature numerous state-of-the-art applications which operate within the Windows 95 environment. Individual academic departments may select specialized software packages which are needed to support their course offerings. While the upgrading of hardware and software is an ongoing process, a large number of new computers has been placed in offices and open labs during the 1996-97 academic year.

Strategy Three - Establish Technology Presentation Classrooms on All Campuses

The third strategy provides for ten technology classrooms scattered among all major buildings and campuses where faculty may apply the new technology for the benefit of students. This network of technology classrooms will be connected to a media retrieval system which will further extend the media selection options of the instructors. The logical extension of this strategy is to provide a computer for every student in every classroom. These infrastructure enhancements will be accomplished by the summer of 1997.

Strategy Four - Build the Gorsich Advanced Technology Center (GATC)

The GATC will provide a high-technology facility where faculty can work closely with business and industry to design and manufacture products which are immediately marketable. This environment will provide students with a sound technical and general education which quickly responds to industries' demands for multi-skilled employees. Exposure to ultra-modern rapid prototyping computer techniques will give PCC students a distinct advantage in their pursuit of desirable technology-based careers. The GATC will be opened in the spring of 1997.

Strategy Five - Integrate SCANS Competencies into all Phases of the Curriculum

PCC is making a concerted to revise all areas of the curriculum so that the employment skills needed by students as identified by the Labor Secretary's Commission on Achieving Necessary Skills. Faculty are trained and given incentives to revise curriculum to address the five major competency areas of dealing with resources, interpersonal skills, information processing, systems, and

technology skills. The importance of current technology skills acquisition is supported and strengthened by all of the strategies described above. This initiative is currently in progress and is on-going.

Strategy Six - Implement School-To-Career Grant Program

The School-To-Career Partnership grant obtained and managed by Pueblo Community College allows job shadowing by faculty and gives them training in ways to enhance curriculum by adding career knowledge to classroom instruction. This initiative is currently in progress and is on-going.

Instructional Innovations Through Technology
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Tallahassee Community College (TCC) has aggressively utilized technology to meet the challenges of serving a diverse student population in a large geographic region. Technology is an indispensable component of and central to the delivery of educational services. This narrative highlights three broad initiatives utilizing technology to provide or expand educational services.

1. Technology has enabled TCC to expand its services beyond the boundaries of a campus and provide services to large rural areas. TCC primarily serves three counties: Leon, Wakulla and Gadsden. While Leon County, the seat of Florida's capital city, is a rapidly growing urban area, Wakulla and Gadsden counties are rural. Expanding the services to these rural counties is possible through distance learning. With two-way audio and video capabilities, TCC's first interactive classroom became a reality in January, 1997. This classroom, located at TCC, transmits courses and allows the college to provide a variety of educational services directly to the citizens and students in Gadsden County. This provides greater access to Gadsden County and reduces the transportation costs for residents.

The interactive classroom also facilitated local high school-college articulation efforts. Two of the fifteen classes currently offered are available to students enrolled in a private college preparatory school, thereby allowing students to earn college credit while still enrolled in high school. The addition of two other high school sites and one site in Wakulla county is planned for the 1997 fall term.

Funding for the interactive classroom comes from multiple sources. Through distance learning grant dollars, the College purchased the necessary equipment. Line charges for the first year are paid by the Florida Department of Management Services' special appropriation to encourage public school involvement with distance learning.

2. TCC has expanded beyond its geographic region and will offer a Physical Therapist Assistant Program via distance learning with Broward Community

College beginning in the fall of 1997. Students can complete the general education courses through any of TCC's delivery systems, e.g. on campus instruction, telecourses, print-based distance learning on Internet. The specialized classes will be taught using compressed video which allows for two-way audio and video communication.

In addition to the Physical Therapy Assistant Program, TCC has established a partnership with Palm Beach Community College to offer an Occupational Therapy Assistant Program via distance learning in the fall of 1997. Offering these programs through distance learning allows otherwise high cost programs to be provided in a cost-effective manner. High student and labor market demand exists for both the Physical Therapy Assistant and Occupational Therapy Assistant Programs.

3. The mission of TCC has expanded along with its student enrollment. In recent years, TCC has focused on the non-traditional student. In order to meet the needs of the non-traditional student, TCC utilizes a variety of educational delivery methods.

TCC recently began joint program management of an educational access channel. Through a cooperative agreement with the local public school district, TCC has the capability of providing wider or specialized viewership via ITFS (microwave) transmission. In January 1997, a total of 15 credit courses and a host of community service programs were offered via television. Because of this instructional technology, very few trips to campus are necessary for the students and lessons are shown at least twice per week for the convenience of students.

Alternative Instructional Methods or AIM courses have been developed for home study and are ideal for the non-traditional student. In fact, 48 classes are offered through AIM, enabling a student to earn an Associate of Arts degree, if desired. This print-based distance learning format provides the curriculum of the traditional classroom course but does not require attendance in class and students may enroll at almost any time during the year. Several of the courses are available on the Internet with more being converted later to this format. Comprehensive course guidebooks are provided. AIM courses are taught by TCC faculty members who are available to students for tutoring.

Technology has enabled TCC to deliver educational services in ways only imagined a few years ago. These initiatives are readily adaptable by other colleges. In fact, the beauty of technology is that it allows for quick adaptation. As a leader in distance learning in Florida, TCC will continue to provide innovative methods of delivering educational services to our students.

Instructional Technology
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Burlington County College has been involved in several initiatives to increase the use of technology on campus. These have included:

- The IPSI and Electronic Syllabus Project
- Design and construction of interactive television classrooms
- Extensive use of multimedia in a variety of disciplines, including Biology, Nursing, Mathematics and other fields
- Extensive in-house training of faculty and staff in the use of Microsoft Word, Excel, PowerPoint, Pegasus e-mail, and Internet/World Wide Web access

The IPSI and Electronic Syllabus Protect

The college has embarked on a process of developing standardized electronic syllabi for each academic discipline. This project will result in consistent course goals and objectives, regardless of who is teaching. For example, BCC offers dozens of sections of College Composition I. Many are taught by full-time faculty, while others are taught by adjuncts. Through this project all faculty, whether full-time or adjunct, will share a common syllabus with the same goals, objectives, and texts. The ultimate beneficiaries will be the students. As this project progresses, all syllabi will be on-line as part of the college's website, enabling current and prospective students to learn more about BCC courses.

Burlington County College is using software developed by Instructional Performance Systems, Incorporated (IPSI) for this project. IPSI's Course Building software helps instructors produce syllabi that address the what, how, why and when of performance instruction. Simply put, it ensures that what is in the syllabus is taught and that what is taught is what is evaluated. Additional IPSI software, LessonBuilding helps in the process of class planning, while ExamBuilding helps faculty develop test item pools and facilitates straight-forward test development. IPSI's Analyzer evaluates the curriculum based on the use of the other IPSI modules.

To thoroughly acquaint faculty with the IPSI software Burlington County College has conducted a series of voluntary workshops. To date 45 full-time faculty representing a variety of disciplines have participated in these hands-on workshops. It is expected that within one year all academic disciplines will have standardized syllabi.

Design and Construction of Interactive Classrooms

In April 1996 BCC activated the first three of a total of seven interactive classrooms that are being used for live distance learning instruction. These multimedia/distance learning classrooms are linked to six local high schools via Bell Atlantic fiber optic lines and are capable of point to point and point to multi

point two-way video instruction. Using ISDN phone lines into a campus master control hub these classrooms are also capable of linking with similarly equipped instructional, business, and videoconferencing sites throughout the U.S. The rooms also have satellite downlinking capability. The college is currently completing the installation of similar rooms at its branch campus in Mt. Laurel, New Jersey, and is in the final stages of activating a 75-seat videoconference room in its new campus library. Faculty are being trained in the use of these rooms by the college's in-house educational technology specialist.

Extensive Use Of Multimedia

Several academic disciplines currently use multimedia to enhance the teaching-learning process. Nursing began the college's foray into interactive multimedia nearly six years ago with interactive videodisk technology. Students use realistic patient simulations to practice what they have learned in the classroom before they begin their clinical internships at local hospitals and other health care facilities. Interactive programs include Emergency Simulation, Medication Administration, Treatment of the Elderly Cardiac Patient and others.

BCC has achieved national attention for its innovative use of Animated Dissection of Anatomy for Medicine (A.D.A.M.) software in its Biology classes. Anatomy and Physiology students use the A.D.A.M. lab's realistic human dissection simulations to learn things not possible with the past practice of dissection preserved fetal pigs, cats, and other animals. Following the initial capital outlay for the Macintosh systems and A.D.A.M. software, the college has realized a considerable saving in not having to purchase preserved animals and later facing the rising cost of sending the remains to a special landfill.

Several members of the mathematics faculty have made extensive use of computers and electronic calculators to improve student success. Computers are also used extensively in the Computer Graphics and Multimedia (formerly Graphic Arts Technology), Engineering, and Fashion Design curricula.

Extensive Faculty/Staff Training

Several years ago BCC established an in-house training program for faculty and staff to ensure that they are properly trained in the use of the college's official software systems, including Microsoft Word for Windows, Excel, PowerPoint, Harvard Graphics, Windows95, and Pegasus e-mail among others. The training is conducted during the regular workday by a full time trainer from the college's Community Services staff and by the college's new educational technology specialist. To date virtually every administrator and supportive staff member and many of the full-time faculty have undergone training in at least one of these software programs. Faculty are being encouraged to learn PowerPoint so they can enhance their classroom lectures with colorful graphic presentations. Recently workshops in multimedia authoring tools have been added to the offerings for faculty and staff. During the coming months workshops have been scheduled in PowerPoint and Advanced PowerPoint, Multimedia Authoring Using ToolBook, Microsoft Office, The Internet and the World Wide Web I and II, File Management, Electronic Gradebooks, and Large Group Presentations Using Multimedia. Also scheduled are a Teaching, Learning and Technology roundtable, and drop-in sessions for faculty who want to individually experiment with projects in the college's Educational Technology Center.

MGC Web-Hypermedia Development Project

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The Middle Georgia College (MGC) Web-Hypermedia Development Project is a small, rural community college's response to the high cost of cultivating a useful and representative Internet presence. Its primary goal is to develop a system of Web service administration at MGC in tandem with a system of educating and supporting faculty and staff - and to some extent administrators and students - interested in hypermedia production and utilization of the Internet.

The determined rationale behind the Project is to make it relatively easy for faculty members to publish their writing for the Internet and to include them in a number of crucial decisions regarding Web service and Web server access, Internet applications (especially for distance learning), hypermedia and multimedia education, inter- and intra-collegiate collaboration, Web site and Web page formatting and design, censorship and copyright issues, writing standards and copy-editing procedures as well as other significant, proprietary concerns.

Unlike many other institutions that have already developed Web service and hypermedia policies exclusively within computer services or computer science departments, MGC's development strategies promise to be more inclusive and interdisciplinary. That is, at MGC cyberspace will be a place for everyone: a grand, ever-evolving, interactive publication that truly represents who we are and what we do on our campus. To preserve such a vision and to implement such a publication, however, the Project advocates offering service, education, and assistance to faculty and staff members in all divisions.

In keeping with the idea that the best way to grow anything is from the ground up, the Project strategy is highly flexible, allowing Web service and hypermedia production to develop organically; cultivating it, yes, but allowing it to grow into what it becomes. The incremental, "develop a project" approach is taken instead of the "create a department" approach. And, thus far, the college has benefited greatly.

First, MGC incurs only a small financial risk. The rationale is that there is little reason to build an expensive Web system and pay expensive Web authors and managers when substantial hypermedia projects can be produced only as quickly as MGC faculty, staff, and administration can develop them. Plus, as time passes, Web servers and Web-authoring tools will get more powerful, easier to use, and much cheaper to buy. Second, if Web service and hypermedia production is developed as a "project" in which all faculty, staff, and administrators may take part, people will acquire the particular skills they need in order to publish materials on the Internet themselves rather than pass that duty on to a "department" that could never hope to be as knowledgeable or capable.

To date, every academic division on campus has a Web service liaison. This person is responsible for disseminating Web service guidelines and policy to faculty and staff, fielding Web service and hypermedia production questions, and

creating and/or updating his or her division's home page. In the future, divisions will most likely have their own Web server and their own server micro-management. But until we truly need these, the Project has adopted a system of sharing, of maximizing the use of the servers we do have for faculty and making them available for general faculty use at MGC. In the interim, other servers of various platforms and serving capacities might be purchased, or computers already on campus might be transformed into designated servers.

Transforming people, however, is the real key. Educating faculty and staff members about hypermedia and how it might be applied to instruction is absolutely essential to making the Project a success on campus. Getting faculty members into a classroom that is not their own can be somewhat tricky, though. For this reason, the Project director is trying three approaches to educating this particular group. First, she has introduced Web and hypermedia concepts to faculty and staff through relatively small, division seminars; second, she offers additional education through in-house and Continuing Education seminars; and, third, she has cultivated an informal group of folks interested in technology that regularly exchange information and develop skills at their own, more accelerated pace.

Since good teaching is not just the dissemination of knowledge, but also the reinforcement and enabling of knowledge, faculty and staff members are supported in their hypermedia endeavors, whether it is just a question about how to create some electronic effect or a request to help out with writing some hypermedia project grant, the director is willing to assist busy faculty or staff members. In addition to making herself fully available, the Project director is also developing a network of "faculty assistants" and maintaining a Web site (http://gsams.mgc.peachnet.edu/web/project.html) of valuable information about the Project.

The Project itself is maintained by a two-person staff, including a director, who divides her time equally between teaching duties and Web work, and a student assistant, who works approximately ten hours per week. The director manages a small ($3000) budget that may fund computer hardware, software, student employees, education, and supplies.

Master Tracks Tutorial
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The Music/Humanities Lab at Miami-Dade Community College provides services for students, faculty and staff with a wide range of technology and support for applications in music, art, Internet access and general Humanities instruction. Students utilize the lab for various music theory class assignments, such as the creation of their own original music compositions. As technology becomes more a part of the musical creative process, the new tools available to the student must be taught along with the traditional creative methods. One such tool is music sequencing software. The introduction of this technology can be quite intimidating

to the student, and the sight of a large manual crammed with mystical terms and technical jargon is often enough to dissuade even the most creative of minds.

The process of music sequencing is similar to multi-track tape recording. However, the computer acts as the tape recorder, recording MIDI data rather than sound. The advantages of this method are the ability to manipulate the data in a variety of ways which are impossible on tape media such as transposing pitch without changing speed, changing instruments, and finally converting the sequence into musical notation for performance by live musicians. This is all made possible through the use of MIDI. MIDI is an acronym for Musical Instrument Digital Interface, and allows various types of computer and musical hardware to communicate with each other. This is an efficient means of creating music using technology; the student is able to realize musical compositions without the aid of other musicians and/or written music, and in a relatively short period of time once familiarized with the process. The problem is that it is frustrating for the student to spend hours of their time searching through manuals to become familiarized with the sequencing software and the sequencing process. It is with this in mind that the Master Tracks Tutorial was born.

The Master Tracks Tutorial employs interactive simulations/animations and text, that guide the student through the actual procedures that they will follow when sequencing music using Master Tracks Pro 5.2 sequencing software. This program is an efficient alternative and augmentation to the manuals, and is available at the click of a button! Included in this interactive tutorial are explanations of MIDI terminologies as well as general information regarding MIDI which apply to any program that facilitates sequencing and/or notation.

This tutorial further accelerates the learning process by enabling the student to access only the information pertinent to his goal. Once within the tutorial, the student may access the information in a variety of ways: choosing a menu item (the menus are programmed to appear and perform exactly like those in Master Tracks); clicking on the underlined words in the index which appears on the start up screen and is accessible at any time throughout the program by pressing the "Option" key (on the Macintosh computer); clicking on underlined text throughout the program to access a glossary (also containing simulations/animations), and examples of various types of hardware (the latter in the form of a slide show of equipment from the Music/Humanities Lab and the MIDI Lab); a forward button which progresses through the tutorial linearly by menu item; a retrace button which travels back to previously accessed locations in reverse order; and miscellaneous buttons related to specific topics depending on the student's location in the program. The program enables the student to access the information in a non-linear fashion, much as an on-line help; switching back and forth between the tutorial and Master Tracks, and applying the relevant information immediately. Many of the simulations are interactive and depend on user input to continue: the student is, therefore, a participant in the learning process rather than a passive observer. Such incorporation of multimedia is well suited to the current learning styles of today's students. They are accustomed to visually oriented, interactive situations, and are better able to learn the information when they are permitted to learn at their own pace.

Any school with a music curriculum incorporating MIDI and using Master Tracks Pro sequencing software at any level will find this tutorial useful. The simple, thorough explanations of often confusing technical concepts, and the freedom to

explore the areas of the program in which the student is interested stimulate the learning process. Included are examples and techniques gained by insight and experience as well as information universally constant throughout the range of MIDI software on the market.

The utilization of Macromedia Director 5.0.1 (authoring software) in combining Quicktime movies, digital sound and images in a user-friendly, colorful environment (with a little humor from the MIDI Dude, a 3D QuickTime animation created using Infini-D) shows that Miami-Dade Community College is in line with the current trend of integrating world class technology into the classrooms and labs. Students from institutions including The University of Miami, and Florida International University often enroll in the continuing education class offered at the Music/Humanities Lab to utilize the advanced technologies, wide range of information resources, and experienced staff at their disposal. Efforts such as the Master Tracks Tutorial keep Miami-Dade Community College and the Music/Humanities Lab in a position of leadership in the field of music technology in the Miami area.

The Music Business Online Curriculum
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The Music Business Online Curriculum is an innovative tool for contemporary education. This new curriculum utilizes the Worldwide Web on the Internet (today's cutting edge technology) as an educational delivery system.

When combined with traditional classroom instruction, the student experiences a new style of learning. Students are required to do extensive online research to complete specific course assignments. Music Business students, all Music Majors, Music students, and Business students now have access to a staggering amount of resources and information not available to them otherwise. Numerous links, to the Internet's Web sites all over the world, correspond directly to the teaching strategies used in the Music Business classes. This unique curriculum gives the Music Business student the opportunity to grasp a broad and current overview of the entire music industry, with its professional opportunities, responsibilities and glamour.

The online curriculum is designed for students to access their assignments on campus in the computer labs, and at home if they have the required equipment (a computer with Internet access). The number of students who have this capability is growing rapidly. The class outline for each semester is located on the Web site. Students can print out a class outline that gives them weekly Web assignments correlated to their class assignments. The areas of study currently include the following broad areas within the Music Industry:

- Careers
- Copyright
- Distribution

- Licensing
- Management
- Media
- Publishing
- Radio
- Recording Industry
- Teaching

As one example of how this online curriculum is used, students assigned to study the extensive topic of copyright law do so in class and then log on to the Web site. Here they print out their copyright assignment worksheet. Then they go to the copyright assignment Web page and use the provided links, which take them to various sites on the Internet related to copyright. Here the concepts and ideas they are studying are brought to another dimension through graphics, text and sound files, providing real world, practical and relevant copyright information. At the Copyright Web site students will:

- Learn to register works with the Copyright Office and print the correct registration form right off the Web site. In the past, individuals would have to call, or write, the appropriate branch of the Copyright Office and wait for the forms to arrive in the mail.
- While studying criminal liability for copyright infringement, students can explore cases of famous copyright infringement, and the people who have encroached upon another's copyright and paid the price. Through audio clips and digitally scanned pictures, directly accessed on the Web site, they can hear audio comparisons of the music in question, hear an audio clip of the Supreme Court decision and link to relevant references and citations.

During the process described above, students are filling in their assignment worksheets. Upon completion, students hand in these worksheets to their instructors.

The areas of study chosen for the Music Business Online Curriculum are universal to the study of the Music Business industry, no matter where it is being taught. Also, because the curriculum is on the Internet, students at any college or university world-wide can print out the assignment worksheets and complete the objectives of the online curriculum. Everyone across the globe, with online capability, has access. This is an important point, regarding our changing world and its expanding global communication. This online curriculum marks the beginning point of a national and international presence for our Music Department, and Miami-Dade Community College.

The following are instructional goals of the Music Business Online Curriculum:

- This course will provide an overview of online technology and its use in the Music Business industry. Students will become proficient in accessing the largest online network, the Internet.
- Students will develop an understanding of the common elements and organizational patterns of the Music Business.
- Students will build a knowledge base of online management and promotion of commercial and non-commercial music, online distribution and sales of recorded music, online retailing of sheet music, copyright, artist development, publishing, the recording industry, and concert promotion.

- The goal is to provide a foundation of knowledge for future understanding and learning within the Music Business environment and prepare well-rounded students who are knowledgeable in all aspects of the music industry.

Recently, a new Associate in Science Music Business degree program was approved for Miami-Dade Community College. Its launching site is the Kendall Campus. This new degree program will later be taught at the North Campus, where there is also a large Music program. The Music Business Web site is accessible to all students there, over the Internet. Some of the other colleges offering Music Business programs (there are only a few) have Web Home Pages with favorite links to sites related to the Music Business industry. However, I have not seen another site correlated to work directly with specific course objectives. We have shared the existence of our site with other schools but it is too soon to see if, or how, it is being used.

There are many tangible benefits for student learning in using the Music Business Online Curriculum. Studies have shown that when students learn at their own pace, they are more able to effectively absorb new material. By supplementing traditional classroom instruction with student based exploratory learning, students take a more active role in their own educational process. This emphasizes critical thinking skills, enhances students' creativity, and bolsters confidence in their ability to learn. Additionally, students will learn and apply computer research skills, utilizing the Internet as a learning tool. These skills will carry over into all aspects of their academic endeavors, as well as building habits for lifelong learning.

Don't just take our word for it. We challenge you to visit and experience the Music Business Online Curriculum at the following Web address:

http://www. kendall.mdcc.edu/music/MusbushP/MBHome.htm

Enjoy!

New Technology in a Cooperative Environment

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The development of new programs which are technology intensive has always strained the resources of community colleges. There is no question about the need for these programs and no question about the need for providing instruction on equipment and software that is as close to an industry standard as possible. The question is how do you provide these programs in an era of shrinking resources?

San Antonio College was faced with just such a question recently when the need for a program in Geographic Information Systems (GIS) was recognized. GIS is the marriage of graphical data usually in the form of maps with statistical data for

purposes of analysis and decision making. This program requires expensive late model computers and special software. Several areas requiring resources were recognized including staff development for faculty, laboratory resources for hardware and software, and methods of presenting the instruction.

Dr. Roberto Garza, Earth Sciences Coordinator, and Mr. Michael Psencik, Chairman of the Engineering Technologies Department, applied for and were granted participation in a program funded by the National Science Foundation (NSF) and given by the Geography Department in Indiana State University which focused on preparing community college instructors for the development and presentation of GIS programs. They were the only two college professors from Texas selected to participate in this two-year program. The spirit of cooperation was present in that the NSF paid for room and board for each of the three week sessions offered in the Summer of 1996 and 1997, the professors gave of their time and San Antonio College paid for the travel to these programs. From this venture Dr. Garza has developed several courses covering GIS which have been incorporated into new programs in the Computer Aided Drafting and Design program which is part of the Engineering Technologies Department. Currently this college is seeking approval for a one year certificate program in GIS and next year we will seek approval for an Associates degree in GIS. Additionally, we are pursuing 2+2 degree programs in cooperation with Texas A & M University at Corpus Christi.

Computer hardware was also a need for the new programs. The needs for upper level computing power was difficult in this period of declining enrollment. Once again we were able to overcome this problem through cooperation. Since this program crosses the divisional boundaries between Arts and Sciences and Occupational and Technical Education each of the divisional deans recognized the need for this program and were able to fund one laboratory which would be shared among several engineering and computer intensive programs in both divisions.

Software was also a need for the new program with the price of ArcView, the first program, at $1500 per program. Dr. Garza contacted the local representatives of ESRI, the software distributor and once again the spirit of cooperation was present when ESRI gave us the ArcView software for our laboratory. ESRI even sent their technicians out to install the software.

The spirit of cooperation has been present in each facet of this program development from the professors, the college, the National Science Foundation, and ESRI. The cooperation of all of these entities was critical to the timely success of this curriculum development project.

San Antonio College, because of this project, is being recognized as a leader in the development of GIS courses and programs. Presentations about these programs have been made at several state and national conferences by Dr. Garza. Dr. Garza and Mr. Psencik also made a presentation about these programs to the Geography/Geology sectional meetings at the Texas Community College Teachers Association annual conference. ESRI has also been invited to participate and will have a booth in the exhibit area.

In the Fall of 1996, San Antonio College was asked to be one of seven community colleges in the nation to become a partner in a NSF proposal by Indiana State

University to establish a National Center for Geo-Technology Education and Training. If this grant is awarded, San Antonio will become a training center for community college instructors and high school teachers.

Clearly this program is a success story in the utilization of resources from many different sectors. In these times of decreasing budgets many of us may need to look both inside and outside of our institutions for a spirit of cooperation in funding new programs.

Planning for the Future Application of Technology on Campus

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For a small college located in a rural area, GCC has done well in acquiring advanced technology to enhance instruction and facilitate college operations. Gogebic Community College utilizes technology on an increasingly extensive basis in its daily operations as well as in fulfilling its overall educational mission. The challenge is to use technology wisely and to fund technology needs on a cost effective basis.

The college has two new interactive telecommunications systems, Internet, state-of-the-art networked computer labs, a first-rate CAD lab and an especially advanced computerized manufacturing design lab. GCC is part of the Michigan Telecommunications Network (MICHNET System) which allows the college to receive interactive classes and hold live conferences with other colleges throughout the state. A Kellogg grant was received to pay for the installation of a telecommunications classroom and related editing and transmit/receive equipment for the distance learning system.

In the fall of 1996, the college went on-line with live instruction on a new regional interactive telecommunications consortium. GCC is a full partner in this consortium, along with all of the public schools in a two-county region. The secondary schools send high school classes to each other over the system during the day: and the college schedules credit classes on the system during the late afternoon and evening. The college classes originate both at the college and at remote high school sites. In the fall of 1997, the college will be connected to three additional counties in the Western Upper Peninsula.

The distance learning system is based on DS-3 fiber optic technology, which accommodates data transmission as well as interactive audio and visual instruction. This system, which is very high quality, was made possible with the help of a $106,000 state grant and a partnership with Bresnan Cable TV - which provided equipment and line charges at a very affordable rate. It also offers the potential to enable the college to more effectively serve its extensive service area, which includes all of the Western U.P. region. Three of the college extension centers are more than 100 miles from the main campus in Ironwood, Michigan.

Recently, GCC became a hubsite for Internet service in partnership with a regional telephone company. This has enabled the college to provide service for students, all computer labs and the LRC on campus as well as for residents of the community on a very low cost basis. A private industry donation was received to help offset the cost of installation.

The college also has a state-of-the-art instructional computing service - which will soon be completely networked with a comprehensive M.I.S. system. GCC will have on-line, direct dial telephone registration in place by January of 1998.

The college LRC offers on-line search and automated card catalog service as well as an array of CD-ROM data bases. It also houses Internet access terminals.

The technical division includes a state-of-the-art Graphic Arts Program which utilizes advanced design, printing, and graphics equipment and an Automated Manufacturing Design Program, which employs robotics and automated work cells.

GCC has done well in acquiring advanced technology to enhance instruction and facilitate college operations. The continuing challenge is to determine how to allocate available funds for technology to most effectively meet instructional program needs and institutional operational needs, maintain a state-of-the-art environment, and stay within budget limits.

The college cannot buy every new item that comes on the market, and yet it must keep up technically at a sufficient level to adequately train students to enter the job market. The college must also provide for staff development to train faculty and staff to fully utilize available technology. To accomplish this, staff development funds are placed in the budget and protected as part of this process.

To more effectively address these problems, a College Technology Committee was established in 1996, which included faculty members representing all academic divisions, computer services personnel, LRC staff and selected administrative staff members.

The responsibilities of this committee included a review of the overall applications of technology at GCC and preparation of a five-year technology plan. The following areas of college operations and services were included within the scope of this review and are addressed in the plan:

1. Computer-assisted instruction in all areas
2. Data processing instruction
3. Computer services
4. Telecommunications
5. Internet
6. College telephone system
7. Office technology
8. Other areas where technology in its various forms embraces communications

The value of this committee is to enable the college to move forward with technology in a well-planned manner, avoid duplication of equipment and

software, encourage optimum use of resources allocated to technology (both human and monetary), and provide students with state-of-the-art instruction.

The finished College Technology Plan is used as a guide to set unit and institutional goals each year and is also incorporated into the college strategic plan. More importantly, it is used to help set priorities on equipment as part of the budget development process each year. It has brought a rationale, debate and, hopefully, order to this annual process and resulted in an effective orderly procedure for setting budget technology equipment priorities. There is a significant advantage to having an overall college plan to guide this process, in addition to the individual unit decision making process.

The experience of developing and updating the College Technology Plan serves to encourage and reinforce a more global perspective on technology and its applications throughout the campus. Both the college instructional program and institutional operations have been enhanced as a result.

Practical Nursing via Distance Learning
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In 1985, due to low enrollments and the decreased need for health care workers, the Practical Nursing Program at the Black Hawk East Campus closed. Future Practical Nursing students then had to drive 55 miles to the Quad City Campus to meet their educational needs. In 1991 because of the increase in demand for health care workers and increased enrollments the program was reopened. In 1995 the cycle was repeating and the program was in jeopardy of closing again. At the same time Black Hawk College, which is part of the Western Illinois Education Consortium (WIEC), installed our first 2-way interactive compressed video classrooms. Black Hawk College recognized that this was an opportunity to continue the Practical Nursing Program at the East Campus and meet the needs of the community. In August of 1995, our first Practical Nursing Program began over distance learning, with 48 students graduating in May of 1996. Due to the success of our first year, our second year began August 1996 with an enrollment of 49 students.

Our vision statement is "the Black Hawk College Distance Learning System seeks to improve the educational, training and meeting opportunities as well as economic development capabilities of Black Hawk College in partnership with local and regional organizations. As citizens of Illinois, people in the western Illinois region and Quad-Cities area have a right to access resources that will enhance their quality of life, their educational opportunities and their economic competitiveness in a global economy". We feel that we have done this for our East Campus Community by continuing to provide the Practical Nursing Program. Students are able to remain close to home to pursue their education. Each day they are able to decrease their travel time by 2 hours. It is easier for them to arrange child care and to continue to work in their community while going to school. Once they graduate, the majority of the students remain in their

community to work at area health care agencies. This has been a cost effective method to serve a small student population.

Prior to beginning the program, Black Hawk spent a great deal of time working with the faculty to prepare them to teach over distance learning. This training is done through the Teaching Learning Center. Time is spent on classroom techniques, preparing handouts and audiovisuals, hands on practice in working with the system, and giving encouragement. This is vital to the success of the program, and Black Hawk takes this seriously. After the first semester of teaching the Practical Nursing Program, the instructors spent time at faculty orientation, demonstrating the system to all faculty. Testimonials were given and encouragement for others to think about teaching over distance learning. Many faculty responded, and this year we are now offering over twenty classes on distance learning. Faculty who have used the system continue to be involved in faculty training and giving encouragement to beginning faculty. In October, the Practical Nursing faculty will be sharing a presentation on our program at the Teleconference 96 in Chicago. Hopefully other colleges will see what we are doing, and begin to initiate other programs over distance learning.

Teaching over distance learning is not the same as the regular classroom. Research is showing that lecture is the least effective means of learning. In fact it should only be 20 percent of the classroom time. This is even more true over distance learning. In the Practical Nursing Program we have worked hard to develop new ways to help facilitate learning. Much more time is spent on group activities where the students are involved in critical thinking exercises where they must pull out the material from their textbooks. They are given practical situations where they must make decisions. This is a skill that is critical to be highly developed for the nursing profession. Instructors work with them at both campuses during these group activities to answer questions and help stimulate thinking. Distance learning works well for showing procedures. By using the document camera (Elmo) we are able to put on the TV screens close-up views of the equipment and the procedure so everyone can see. In the normal classroom, this was difficult. Using the Elmo we are also able to show pictures from journals, books, or slides. Videos augment the delivery of content. Eventually CD-ROMs will be used in classroom. With a laptop computer, we are now able to include on-screen presentations. By using distance learning, it has forced us to be more creative and organized in the classroom and has therefore improved learning.

The Program is set up so that the instructor originates the class from the Quad-Cities four days a week (eight hours of class time), and from the East Campus site one day each week (four hours of class time). There is a part time instructor as a mentor/support person at the alternate campus. This additional person has been critical to the success of distance learning. The support instructor administers tests, facilitates group projects, assists with group interaction, and contacts technical support personnel as appropriate for system problems. By having the main instructor present each week, the students are also able to ask questions in person, seek help for study skills, and the instructor is able to get to know the students.

Student outcomes to date are encouraging. State Board results from the East Campus thus far show that all students have passed. From the Quad City Campus only 1 student has not yet successfully completed the exam. Our total pass rate is 93 percent.

Solving the Mystery of Context Clues with Dr. Clueless

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BACKGROUND:

Research from the fields of reading and test-taking preparation has shown that the key to success in academic reading (especially for limited proficient language groups, such as English as a Second Language and English for Special Education students) lies in independent practice, direct instruction in reading, use of test-taking skills and strategies, and immediate feedback regarding progress.

All incoming students at Miami-Dade Community College (MDCC) are required to take the College Placement Test (CPT). Research from the results show that 50 percent or more students (both native and non-native) failed to get the cut off score on the reading subtest on their first attempt. Upon completion of their degree program, students at MDCC are required to pass the CLAST exam However, the results from the October 1995, February and June 1996 CLAST Administration First Retake Attempts show that on the Reading Subtest College-Wide only 63 percent ofthe students passed and on Kendall Campus only 66 percent passed. The results from the More Than One Attempts indicate that on the Reading Subtest College-Wide only 50 percent of the students passed and on Kendall Campus only 53 percent passed.

The goal of the six-level ESL Academic Reading Program at Miami-Dade Community College is to equip ESL students with skills to ensure academic success in their majors. This project grew out of an identifiable need of intermediate level ESL students who lacked proficiency in reading skills. This was partly because there were no adequate instructional reading software packages aimed at teaching discrete skills in a non-threatening learning environment. They also needed a means of measuring their progress at the end of the instruction. As a result of these needs, we developed a software program that would easily be incorporated into a reading course or one that could stand alone as independent lab work.

CHARACTERISTICS/PURPOSE OF THE PROGRAM:

The interactive computer program was developed to include a tutorial, practice exercises, practice tests, and a final comprehensive test for Using Context Clues for Level 4 Reading (ENS 1321). The program is entitled "Solving the Mystery of Context Clues with Detective Clueless". The program covered five important competencies: a) definition clues, b) examples, c) synonyms and restatements, d) antonyms, and e) inferences.

The purpose of the program was to develop an interactive and entertaining tutorial that provides direct self-paced instruction in reading the context for clues to build vocabulary. The program includes multiple examples and explanations. The examples are meaningful and utilize problem-solving and critical thinking skills in testing the concepts that are taught. Students are given a variety of

practice exercises with instant feedback for each unit and then given a randomly generated mastery test. At the end of the program, there is a comprehensive randomized final exam. The tests also provide immediate feedback and scores for the students, both on screen and printable.

SOFTWARE EVALUATION:

The program was field-tested with faculty in both the ESL Program and College Prep departments as these would be the departments likely to utilize the program. They evaluated the instructional goals and objectives of the software, the content, the instructional design, technical review, and overall review comments. The faculty who field-tested the software indicated that the program's instructional goals were met. The content was accurate, appropriate, and fosters critical thinking skills. They also felt that getting immediate feedback was an advantage over traditional instructional methods. They also said the software was an engaging interactive learning experience and that the main interface (look and feel) of the program was consistent throughout the program They indicated that the text was readable, clear, and easy to understand. They said the graphics were extremely attractive and communicate intended messages. The interactive exercises run smoothly and informative and corrective feedback were provided. The teachers especially liked the record-keeping aspect of the program overall the faculty indicated the software provided great reinforcement for the material that they taught in class.

Students also evaluated the program and indicated that the software was an enjoyable and useful learning experience. It was easy for them to move around in the program and to quit at appropriate times. They found the text was readable, clear, and easy to understand, the graphics to be attractive and communicated intended messages. They reported that the feedback was helpful, the program ran smoothly, and that all the menu items and program features worked. In addition to the evaluations, the items were also administered to several classes of target population to get feedback regarding the consistency and validity of distracters.

BENEFITS TO STUDENTS AND COLLEGE:

Students benefit from the program because they learn the discrete skills of reading for context clues. They also have the benefit of learning at their own pace. Furthermore, they learn basic computer skills.

The program has the potential to be adapted, expanded and used by both a low-level language training and remedial or developmental reading program for both native and nonnative populations. Another important benefit is that this program can easily be adopted by other colleges.

Strengthening Academics Through Technology

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Inter American University of Puerto Rico is a private institution of higher education which consists of eleven campuses and specialized colleges located throughout the Island including a law school and an optometry school. The Ponce Campus, located on the southern coast of the Island serves a student population of approximately 3,500, many of which are the first in their families to attend college. There are three other universities in the area; however, in the past five years, Inter American University's Ponce Campus has become a model of innovation and technological advancement in the teaching/learning process.

This advancement has been possible due to the clearly established goals evident in the Ponce Campus's mission statement. Ponce's mission has a special emphasis on service related careers and the strengthening of the teaching/learning process through the use of technology.

With these goals established, the Campus began its first step towards integrating technology into the curriculum with the establishment of the Center for Instructional Development. The Center's primary objective is faculty training in the area of computer technology and applications. Special facilities were developed for professors and weekly workshops are given. Faculty have access to this reserved area twenty-four hours a day, seven days a week so that they can develop class materials, do research and learn new applications.

As the professors became more proficient in computer use, they began to express their need for facilities they could use to train their students and use computer applications during class time. The Center for Computerized Learning was developed with this purpose in mind. A twenty-four station room, it was reserved by professors who used specific computer programs as part of course activities. Faculty began to recommend the acquisition of software related to their classes for the Center, and the use of this facility became so popular that it has since been expanded to two rooms, one with twenty-four stations and the other with thirty. A sliding wall was installed to separate the rooms when being used individually, or to open up when all fifty-four stations are needed.

As a consequence of the increased incorporation of computer technology in the courses, students were required to do more and more work outside of class hours which also required computer use. An Open Laboratory became part of the Center for Instructional Development along with the Faculty Area and the Center for Computerized Learning.

A fiber optic backbone was installed to connect all of the local area networks on campus. Two RISC6000's, one designated for academic purposes, and the other for administrative use are part of PonceNet. Connectivity to other campuses and the Internet was provided to all members of the university community as well as remote access. An AS400 was acquired to provide Management Information Systems students with the latest technology, and a computerized Assessment Center was established. Two classrooms were equipped with computers for those

courses, such as English and Spanish composition, whose professors used computer applications as a regular activity of the class.

The faculty and administration at the Ponce Campus recognized the growing need for access to information in this rapidly changing world, and the need for students to become life-long learners who actively participate in the learning process. To promote this, a process of transformation of the Educational Resource Center to a Center for Access to Information began. The first step was the reconceptualization of the service offered at the Center. Traditionally, there are separate sections in an ERC: a reserve section, reference section, periodicals section, circulation and so on. The Ponce Campus began to look at the service that was offered to the users at the library instead of the different collections per se. The result of this reevaluation was the development of two sections: Internal and External circulation of materials. Less personnel were needed to attend these sections and librarians relocated to attend what is known as The Virtual Library.

The Virtual Library was initiated with the establishment of high performance computers (multimedia Pentiums, 120mhz with 32mb of RAM) with connection to internet. Librarians were trained on the use of the internet and specifically the World Wide Web. Older computers were set up as internet terminals with access to text based internet tools such as gopher, telnet, ftp and mail, and librarians were trained in the use of these tools as well. Because less personnel was needed to take care of the circulation of printed materials, these librarians' functions shifted becoming less one of inventory control and more one of research assistants, helping students and faculty access the information they needed for their classes and research. Two librarians were trained in HTML in order to help the Virtual Library grow by incorporating a list of search engines, a virtual reserve area for required reading related to specific classes and a virtual reference section where links to helpful online information could be found. Professors have also begun to include URL's of web pages in their course syllabi and to recommend links for incorporation in the virtual library.

Perhaps the most interesting aspect of the process of technological development of the Campus is the ongoing collaboration in the development of the Campus's homepage on the World Wide Web. Initially just offering general information about the Campus's facilities and services, the Ponce Campus Home Page is now becoming an integral tool in the teaching/learning process. Two on-line courses developed by a faculty member are currently offered through the World Wide Web and accessed through this page, and the admissions office quickly moved to provide an online version of the admissions application for these courses. Several professors have also included supplementary course materials for their students under the academic area of this page. Computer Science and Information Systems *student interns* learn HTML and help faculty and administration develop pages for specific purposes.

This page has also become a link between the University and the community it serves. Several special projects have been developed including *the World Trade Information Center's* page, the Quenepón, an award winning e-zine dedicated to the arts, and *Red PAB* a local radio station's weekly news summary on the Web which is particularly popular among Puerto Ricans living abroad.

What have been the results of all these efforts over the years? From a technological viewpoint, the Ponce Campus is the most advanced on the Island. It

serves as a center for computer training and a model of the incorporation of technology in academia for the other campuses of the Inter American University system as well as for other universities on the Island. All of Ponce's students have access to internet accounts as part of their registration, and they are all taught to use them in the Introduction to University Life course. Technology has become the norm for the university community, not the novelty or the exception. Students and faculty alike have become somewhat local experts in computer technology for the community who looks for them to give workshops, or design web pages. The Campus has also begun to reach out to the community by helping several private schools set up computer networks and connect to the internet through the university's dial-up facilities.

Change in the teaching/learning process is also evident. Students are more active participants in their learning process. They are becoming information seekers, instead of mere receptacles. A change in the role of faculty and librarians can also be seen. They are becoming facilitators, helping students wade through the immense amount of information to find and recognize reliable, valid resources.

In conclusion, perhaps it is most important to emphasize that *the Ponce Campus has done nothing that any other university or college couldn't do.* Inter American is a private university which relies almost entirely on student tuition for its operation and receives practically no financial assistance from the local government. What has contributed to the campus's success in the area of educational technology has been the establishment of *clearly defined goals and priorities as well as a vision of technology as a tool for a teaching/learning process based on access to information and lifelong learning.*

Teaching Laboratory Science and Math Using Interactive Video

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"Of all the institutions that I have worked with on interactive video projects, Colorado Mountain College has been the most thorough in dealing with all aspects of planning and implementation." Ric Robbins, Area Manager for Compression Labs, Inc.

Colorado Mountain College (CMC) provides instructional services to thirteen communities in a nine county area covering approximately 12,000 square miles. While the population of this area is 120,000, the largest single community served is approximately 7,000 (Glenwood Springs population). Given the mountainous terrain of the college district and service area and the winter conditions which exist for much of the academic year, the college has had difficulty in enrolling sufficient numbers of students in any single location to effectively offer the Associate in Science degree.

To address this issue, the college has developed an interactive Instructional Video System (IVS) which currently connects eight CMC sites and six high schools

within our district and service area. When instruction was first offered over the system in Spring 1996, the college offered courses which allowed students to complete business and accounting degree requirements along with 200 level courses toward the Associate in Arts. In the initial planning, the college recognized that the gravest difficulty our students in degree programs was related to science and math, and it was acknowledged that offering laboratory science would represent one of the most significant challenges for use of the IVS system.

The college embarked on efforts to deliver laboratory science via interactive IVS as one of its early efforts as well as higher level math. Currently the college can offer the following math and science courses via interactive television:

General College Biology I
General College Biology II
Introduction to Chemistry I
Introduction to Chemistry II
General College Chemistry I
General College Chemistry II
Calculus I
Calculus II
Introduction to Statistics
Conceptual Physics

Key to offering these classes was the development of laboratories which could be offered apart from a standard laboratory. In chemistry, Peter Jeschofnig has worked to develop micro techniques and a laboratory manual for students which enable a student to purchase all chemistry and laboratory equipment required for these classes for under $50. The experiments are performed at each location where interactive instructional television students are located. The instructor, using the system's interactive video capability, can watch students at any of these sites perform the experiments. Students, in turn, can watch the instructor perform demonstrations.

In biology, Evelyn Boggs has developed interactive, multimedia computerized labs which will be placed on a CD-ROM. The students will be able to complete lab assignments by doing activities on the CD-ROM and in the classroom via IVS. The labs include computer graphics, script, animation, movie clips, microscope slides, still pictures, self-tutorials, questions/answers, music and even practice quizzes. All of the movie clips, microscope slides, and pictures are taken from materials utilized by students in the regular classroom on campus. In fact, the movie clips of microorganisms, filmed using a video camera/microscope, come from fish tanks in the classroom! Having the lab exercises on CD-ROM will enable many more students to experience a lab science than was previously possible. Biology can now be taught via the IVS, telecourse, or possibly Internet and include the scientific inquiry expected in a lab course.

Paul Biagi has developed a portable small physics laboratory in which demonstrations can occur at the home location and which can be transported to other locations so that students might conduct physics experiments. The calculus and statistics courses developed by Paul Biagi and Fred Fisher use computerized problem solving techniques. Each of the instructional labs has a computer in which our students can work with the instructor interactively from any location when working on solving problems within the classroom.

The college began offering these courses in the fall of 1996 and has now offered both chemical sciences, statistics, and physics. Enrollment has ranged from 13 in Conceptual Physics in the first semester to 35 in Chemistry II in the fall of 1996. Next fall biology and calculus will be offered for the first time. Enrollment at any site for these courses ranges from one to ten, and it is only by connecting the sites that we have been able to maintain good enrollment for the courses.

Offering these courses via the interactive IVS has also added flexibility in our ability to offer these classes. For instance, one of the college's two chemistry instructors quit three days before the beginning of classes this fall. The college added a second section of chemistry to the IVS to allow students already enrolled in a regular classroom course to take chemistry.

Finally, the college now finds itself able to offer a degree not intended when the system came on line. We had intended to offer only the Associate in Art degree via the system. Our success in offering math and science will allow us to offer the Associate in Science degree by fall of 1997.

Technologizing the Traditional Music Curriculum

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Tradition meets technology as Belleville Area College (BAC) transforms its Music curriculum through innovative applications of computer technology. Throughout history, the study of music has been characterized by a unique meld of art, science, and technology. From Pythagoras' interplay of music and mathematics, to Edison's phonograph, and now to the evolution of sophisticated instructional cyberware, Music has embraced and has been strengthened by technology. There is no better example of this integration than at BAC, where faculty employ state-of-the-art technologies to complement the traditional emphases and produce marked improvements in student performance.

As BAC Music instructor Jerry Bolen witnessed the new technology moving from research labs to experimental applications and finally to commercial development, he formed a vision of combining hardware, software and instructional practices into an innovative Music curriculum plan that would prepare his students for unparalleled success. Bolen studied how nationally-known institutions were adapting their curricula, even using private funds to visit cutting-edge programs. The technology impressed Bolen, but its classroom use was sometimes disappointing. He found many curricula had not fully adapted to these new tools and that the technology was frequently inaccessible to undergraduates. Bolen and his colleagues were determined to fashion a curriculum that would make optimal use of technology and would ensure that even beginning students would benefit.

Music study at BAC still follows the traditional model of *appreciation*, *performance*, and *theory* (formal study). Technologies are carefully chosen to

supplement, enhance, and motivate learning experiences - to augment existing instruction and to achieve the 80 percent learning retention rate predicted by researchers in multimedia education. This integration promotes individualized learning and frees students from the "lock-step" pace that may characterize classroom learning. The technology empowers students to move through identical material at a pace that fosters individual mastery and simultaneously reinforces classroom concepts. This approach produces increased student participation, comprehension, retention, and success. It also revolutionizes teaching style by empowering faculty with full access to current and future resources; now, they bring the world to the classroom rather than the classroom to the world.

In 1993-94, the first phase of Bolen's plan established a digital piano lab that functions as a multi-purpose facility for both students and faculty. In 1994-95, each digital piano was connected to a computer through a MIDI (Musical Instrument Digital Interface) and music software was purchased. The combination of digital pianos, used in piano class instruction, and Macintosh computers proves an efficient utilization of resources. The lab's central location in the music instruction area is a focal point for the technology-integrated music curriculum and facilitates student-faculty access. In 1995-96, vocal music was fully integrated into the enhanced curriculum.

The plan's second phase focused on the listening, performance, and compositional aspects of music education. Students in music appreciation classes access multimedia CD-ROMs in a full multimedia classroom where instructors integrate computer controlled presentations into classroom activities. Additionally, students are proactive in their study and use computer facilities to more fully explore topics presented in class. The technology also enables individualized study and learning experiences in performance classes. A MIDI sequenced piano course from Alfred Music provides students with "play along" sequences and the *Vivace* system provides the sound of a full symphony orchestra for accompaniment. Students and instructors are empowered to create and change any parameter (pitch, tempo, etc.) of a sequenced performance to enhance their performance and rehearsal objectives.

Continuously being upgraded, the music lab offers software that enhances writing, aural, singing, and keyboarding skills. The *Performer*, *Freestyle*, and *Trax* software enable students to compose at the piano and instantaneously transcribe their performance into notation. The core software for Theory students' skill development is *Practica Musica*, which is designed so that faculty can monitor each student's progress through weekly printed reports. Moreover, sight singing skills are expanded through the use of *Claire*, a program with which students vocally input exercises and are evaluated as to accuracy of pitch. All of these programs provide faculty with maximum flexibility in precisely tailoring exercises and materials for the needs of each class. In 1997, *Vivace* was upgraded to encompass vocal performance, twelve Powermac multimedia computers were integrated into the lab, and internet capability was added.

Beginning in 1996, Music Theory students access technology that enhances their ability to study, analyze, and evaluate their work and the work of others. This occurs aurally through a computer sound system, visually through the use of *Finale 3.7* music notation software on notebook computers and overhead LCD projectors, and interactively on MIQ software. Traditional four part writing exercises (SATB-Soprano, Alto, Tenor, Bass) are displayed instantaneously and

students receive immediate reinforcement of their music writing skills-hearing each exercise exactly as it is being written. The College serves as a national model in this unique teaching of traditional theory.

Belleville Area College's innovative marriage of tradition and technology is demonstrably impacting both student and faculty performance. Since students now learn at their own pace, assume an active role in expanding their knowledge and basic skills, and receive immediate feedback - retention and learning are increasing dramatically. When comparing old and new curricular outcomes, faculty find that the technologized curriculum significantly increases student retention and that student achievement on standardized examinations shows marked improvement. Moreover, faculty find that the technology enhances their own pedagogical skills, resulting in more innovative and personally rewarding classroom experiences.

The College's success in technologizing its Music curriculum is replicatable. Utilizing our research and practical experience, sister institutions can formulate cost-effective hardware acquisition plans and implement curricular changes. Community colleges that make this investment are likely to find themselves in an envious market position by creating a venue for additional technology-based music instruction. BAC, for example, found itself able to offer advanced-level work in music notation that even major regional universities are unable to provide. Additionally, colleges will create opportunities for contractual education that generate fee income from professional musicians and the private sector. Most importantly, their students will enter senior institutions with what is truly a 21st century transfer education.

Technology and Classroom Architecture
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Several years ago, San Juan College received an Honorable Mention from the NCIA for an exemplary program in training faculty in multimedia technology. The award recognized the outstanding faculty development program of the college's Instructional Computing Resource Center (ICRC). Since then, the college has completed training its full-time faculty and has embarked on an initiative to incorporate technology into the delivery of instruction.

The new initiative can be best characterized as the integration of the latest instructional technology into the architecture of the classroom. Eight new classrooms, which were constructed according to a design created by graduates of the Center's training program, incorporated features based on practices developed by ICRC graduates and verified as effective through use in their classrooms. This building project represents the first known effort by any college to integrate new teaching methodology specifically gained through a systematic multimedia training program into the design and construction of classrooms.

Through its ICRC, San Juan College has invested 19,500 hours of training time in its faculty. In addition, approximately 50 faculty have spent untold hours applying their training into the classroom setting in all of the disciplines taught at the college. In doing so, however, they have found that they are using the latest technology in classrooms designed for the teaching/learning environment of yesteryear.

Soon after the development of the ICRC, the college had the opportunity to design a four-million dollar classroom addition. It did not take the faculty long to realize that this building project presented a unique opportunity for the college to build classrooms specifically designed to take advantage of the training in which the college had been investing for the past several years.

In response to this opportunity, the college administration took the following important steps.

- The college employed an architect to design the new building.
- The college called upon the Director of the ICRC to work with current and past faculty trainees to generate ideas about the features that faculty would like to see in the new building.
- Under the direction of the Vice President for Instruction, the college formed a faculty steering committee to evaluate the ideas and give advice to the administration as to the final plan for the building.

This process took several months to be completed and resulted in a classroom unlike any ever built at the college.

The design of the new classroom is essentially that of a little theater, rectangular in shape but with a teaching trapezoid at the front. It has three presentation areas for the display of images. One of the areas is a combination screen and whiteboard, where images can be displayed and writing can be done. One of the surfaces is used to display images from a ceiling-mounted three-gun projector. Another may be used for an electronic whiteboard if the need arises to use the classroom as a distance learning venue.

The room has no windows, an issue on which the academicians and the architect disagreed. Although the architect wanted to install windows for aesthetic reasons, the faculty wanted total control of the learning environment.

To insure the total control desired by the faculty, the entire learning environment is controlled by the faculty member with either a touch-screen apparatus or a mouse which she can use to simply point and click to call any teacher utility into play. The sound system is built into the ceiling, providing equally good acoustics for students no matter where they are sitting. The lighting - an innovative, adjustable fluorescent system - allows the teacher to create the exact level of lighting to achieve the most desirable instructional effect. The teaching trapezoid is built with a false floor to allow maximum flexibility for the positioning of the teacher control unit, guaranteeing that the teacher is truly in control of the classroom environment.

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These little theaters have tiered seating for the students in order to provide the best possible viewing of the three display areas. The rooms have been dimensioned so that there are no bad angles, even from the back row, corner seats. An earlier design had not taken all of the viewing angles into consideration and had to be discarded when a prototype was loosely constructed and evaluated by the faculty.

It is important to emphasize that the input of the faculty steering committee was invaluable in the design phase of this project. Besides being able to draw upon their own teaching experience, these faculty were sent to other colleges to see newly constructed classrooms. Based on their experience and observation, the faculty were able to provide excellent advice throughout the process, and the design of the classrooms is really a product of their imagination and ideas.

Faculty input was not limited to the shape and size of the rooms. They also provided valuable insights into the type of sound and lighting systems that maximize student learning. Even the placement of the doors and light switches were matters of discussion as the project took shape. Once all of the input was gathered, the architect worked diligently to incorporate all of the faculty's suggestions, resulting in a high level of buy-in for the eventual design.

In addition to the classrooms themselves, the college has included a computer commons into the building. The computer commons provides an area in which students can work in small groups or individually at college-owned computers or at their own laptops. In this area, there are docking stations at which users are able to tap in to the college's main computer system to work on assignments, utilize printing and other ancillary services, and communicate with teachers and other students.

San Juan College's new building offers instructional space based upon the real experience of highly-trained faculty incorporating multimedia technology and methodology into the architecture of the classroom. It is the result of thousands of hours of training and practice by the faculty at the college and was designed by faculty for faculty. It is yet another example of how community colleges are leading the way into the twenty-first century

Technology and Instruction
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The vision of Northwest Technical College (NTC) is to provide technical education and services to businesses and individuals "anywhere, anytime." The changes in our culture, in the nature of business and industry, and the rapid advances of technology, all signal a fundamental transformation in how we will go about the business of education in the future. NTC is making great efforts to take its classes beyond the classroom and into businesses and homes through varies technologies and the use of distance learning.

Composed of five northwest Minnesota campuses, (Bemidji, Detroit Lakes, East Grand Forks, Moorhead, and Wadena), NTC has completed the development of its very own distance education program, and is currently the only technical college in the world offering electronics courses (based on a multi-media electronics curriculum) through the Internet. The use of the simulated workbench allows students to take the electronics courses away from the classroom via the distance education program offered through the Internet. Our instructor, Gary Ellingson, is currently using this method in the classroom, in addition to the Internet. Gary believes it is a more efficient way to present electronics, while retaining the quality of the program. It also is a method of reducing costs and safety problems when used in distance education.

On August 6, 1997, NTC was awarded a $250,000 grant from Minnesota State College & Universities (MnSCU). This grant is currently being used for the development of a new distance learning program in practical nursing. The grant is a MnSCU initiative designed to promote the use of electronic learning methods to improve access to higher education and to give students expanded educational options.

In addition, NTC was selected to receive a $100,000 grant from the Rural Utilities Service of the United States Department of Agriculture. This telemedicine grant will be to encourage and improve the use of advanced telecommunication, computer networks, and related advanced technologies. Through distance learning the telemedicine project will provide educational and medical benefits to people living in rural areas and to improve rural opportunities. Through this project, NTC will develop instructional programming in practical nursing. End users in rural communities will access this electronically complete associate degree.

It is NTC's goal to deliver distance education to students who are economically, geographically and physically challenged. Because of this goal, NTC has offered long-distance learning for a few years through the use of two way video and audio interactive television. This technology is used in a way that benefits students who want to take advantage of educational opportunities, but are limited geographically. During the 1995-96 school year NTC used interactive television to provide 12,468 actual credit hours.

NTC also believes in putting technology in the hands of its students. At the beginning of each quarter new and returning students are issued laptops for use within their program area. This gives the students the ability to communicate via e-mail with their instructor and classmates. In addition, it has allowed NTC to create paperless classrooms. Because of the number of IBM laptops we issue (over 4000), NTC was recognized by IBM as the Laptop University.

NTC's relationship with IBM has granted us to be the only technical college partner of the IBM Global Network. The Global Campus consists of traditional college and university functions carried out in innovative ways to strengthen the quality of education, increase personalization and save time for students, faculty and administrators.

Through IBM Global Campus on-line networks, students will receive information about colleges, apply for admission and financial aid, enroll in courses, interact with faculty and other students, and receive credits. Through the same networks,

faculties can share research, develop curriculum ideas and facilitate class discussions.

The challenge for NTC and educational institutions is to keep up with technology, update staff and provide accessibility. NTC is meeting this challenge with energy, enthusiasm and a renewed sense of purpose-leading the way to the future. Visit us at our web site http://www.ntc-online.com.

Tutoring Technology
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Tutorial services at the Learning Center of Lakeland Community College are exceptional in several ways. Unlike many centers who use student/peer tutors, the Learning Center employs an average of 60 "professional" tutors, meaning that they hold a bachelor's degree or higher in the field in which they tutor. These tutors have part-time faculty status and are paid accordingly. All tutoring is free to students enrolled in credit courses and as expected, the student use of tutorial services is high and increasing every year. In addition to professional tutors, the Learning Center houses a state-of-the-art computer lab which includes 24 Pentium 100 PC's with CD-ROM drives, 4 Power Macintosh 7200's, printers, a scanner, and an Arkenstone voice-output system.

In Spring of 1996, Lakeland Tutors and the center Director met to discuss ways to address the ever-increasing student demand by using alternative instructional delivery systems. The computer lab was targeted for use beyond providing commercially developed software to address individual student needs. The solution was to develop "in-house" tutorial modules on CD's focusing on courses with large student enrollments and significant need for incremental, repetitive practice. Basic Algebra was chosen as a pilot course. Most tutoring for this course relies on repetition of similar problems to assist students in seeing patterns of method and begin to internalize basic concepts such as reciprocity, isolating the unknown, and use of formulas.

A production team was formed that Spring, which included the Chair of the Math Department, the Director of the Learning Center, the math tutors, and a production engineer who was an engineering tutor pursuing his Master's degree in computer-media interphase. The team reviewed the course syllabus and text for Basic Algebra and developed 8-10 "exemplary" problems for each chapter included in and the order in which they were included in the syllabus. The team felt it was important for the modules to match closely with the material being presented in the class.

Tutors were videotaped working through the exemplary problems. Each step was explained in detail as to method and also to underscore the concepts being illustrated by the problem. The videotape was stored directly onto a hard-drive and then copied onto a blank CD. A member of the team then designed software to provide a "point and click" menu and indexing system for the student to find

and activate the desired module. Videotaping was done with a standard, manual-focus camcorder in a cubicle at the Learning Center. The camcorder and microphone were connected to a Pentium 90 computer equipped with a sound blaster, video blaster and writable CD drive.

Using this process, tutorials were produced that would allow the student to insert an appropriate CD in the CD-ROM drive of the Learning Center's computer lab and directly access, both visually and auditorially, the solution to, along with the explanation of, a problem that relates directly to their Lakeland course. Using a computer mouse, the student selects a problem from a list that is indexed by textbook chapter and course topic. The solution to that problem is then demonstrated in a video that plays on the computer screen. The professional tutor is viewed writing the steps on a chalkboard with a concomitant explanation of the overall concept and justification of each step. The student, using the computer mouse, can stop the presentation at any point, back-track to see and hear the explanation repeated or skip ahead to view advanced steps.

These CD's have several advantages over standard video-tape and paper and pencil packets. Students can pinpoint almost instantly a particular problem or type of problem they wish to review. It is easy to repeat steps and to jump back to previous problems when needed. The CD's do not require a separate room or use of limited VCR equipment and they are highly durable. It is not practical to include extensive narrative in paper and pencil packets to explain each method in even a simple algebraic solution. As a result, students often learn methods by rote without understanding the reasons for the manipulations of the "givers" and "variables". Tutors on the CD's give in-depth verbal instructions and elaborations while demonstrating the solutions. The CD's provide a multi-sensory method of learning which includes vision, hearing, and even motion to enrich the learning process. Finally, the CD's are "customized" to the course that the student is taking in terms of order of presentation, content emphasis, and consistent methodology.

These CD's do not replace tutoring sessions, but allow students to optimize their one-on-one time with the tutor. Rather than practicing basic steps in a tutoring session, the tutor can focus on problematic concepts and answer specific questions. Unlike the limits of individual tutoring sessions, the CD's are available for use six days a week, and as often as the student can come to the computer lab to use them. Also, students will not always ask a tutor to repeat a problem for fear of appearing slow. Students using the CD's can repeat steps and problems as often as they like at the privacy of a computer terminal.

Based on the success of the Basic Algebra pilot, the Learning Center also produced a set of CD's for Intermediate Algebra and Introduction to Chemistry. These CD's are now in their second quarter of use and have been rated as highly useful by students and are actively promoted by the faculty. The Fall 1996 evaluations showed that 90 percent of students who used the CD tutorials rated them as a "highly significant" factor in their overall course achievement. Lakeland faculty are excited about the possibilities presented by the availability of this technology. Plans for future projects include taping supplemental lectures by faculty, development of modules appropriate for English/Humanities courses, student orientation modules, and taping student presentations.

Using Technology to Create Change:
Alternate Delivery of Instruction Grants

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Creating innovation to meet the needs of new student populations is a formidable matter for educational institutions. Shifts of student patterns forced Milwaukee Area Technical College (MATC) to rethink how classes are delivered. The college established a goal to develop more flexible instructional delivery methods as part of its focus on the future.

Using a capital equipment fund allocation of $1.5 million over a three year period, a design was developed by a diverse team to implement multiple alternate delivery technology systems. An internal competitive process, focused on maximizing existing resources, while designing instructional technology systems that meet the unique needs of programs and services at MATC. The models were formed by existing staff, working in cross-functional quality teams to devise solutions for space, facilities, equipment, staffing and operating resources. Each project team identified alternate delivery solutions that were fashioned to address instructional applications that can be replicated in other areas of the college.

Working under the auspices of the Alternate Delivery Technology Committee, this initiative is currently in the second year of implementation. This team of faculty, support staff and administrators serve as the clearinghouse to determine guidelines and keep project activities on track. Projects are identified through the process of Request for Proposals (RFP). A review of preliminary proposals is completed to ensure that the established criteria has been met and to encourage collaboration. Final proposals for funding air selected by the Alternate Delivery Technology Committee members and one representative from each of the proposal teams.

These projects are currently being developed:

1. Two-Way Video Instruction for FasTrak Marketing and Interior Design.
2. Audiographics for Landscape Design, Math, Electronics and Dietetic Technician.
3. Video Conferencing for Office Technology and Corporations in the Private Sector.
4. Instructional Learning Resource Network for Workforce Development Institute.
5. Multimedia Presentation Center for Visual Communication/Computer Graphics, Marketing and Commercial Art and Photography.
6. Natural Science Alternative Instructional Delivery Laboratory.
7. Microcomputer Software Open-Entry Distance Learning Project.
8. Cornerstone Project for Adult High School and Workforce Development Institute.

The initiative has provided a unique method to institute change in the delivery of instruction. It has encouraged faculty and staff to develop teamwork across the confines of the institution's structure, to address technology issues in the delivery of instruction. Resources required to support the implementation of the technology had to be identified from existing resources. in addition, support services required realignment to meet the needs of students served by these systems.

This activity has been a guiding force to begin change in a large urban institution, where shifts traditionally occur slowly. The college as a whole, has been inspired to think outside of the box to incorporate the required support for these systems. In addition to the development of new technologies for instruction, more intrinsic outcomes include an increased sense of renewal, enthusiasm and team work across departments and campus locations. The college has learned new protocols to hold meetings and staff activities from various sites. Each action is providing improved methods for learning and more adequately meeting student needs.

SECTION II

INITIATIVES WHICH FOCUS ON THE CURRENT REEMPHASIS ON STUDENT LEARNING

PROGRAM AWARD WINNERS

Supplemental Instruction
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Introduction:

St. Louis Community College initiated Supplemental Instruction (SI) during the 95/96 academic year. Immediate program success and Meramec leadership encouraged one sister campus to implement SI the following year and the other sister campus to begin implementing SI this year. Success has been a result of campus collaboration, administrative and faculty support, controlled growth and assessment, and most importantly the excellent Meramec students who have served as SI Leaders.

Teaching and Learning Practice: Supplemental Instruction

Supplemental Instruction (SI) is a non-remedial, institution-wide academic support service which increases student performance and retention. The SI program targets high-risk courses - those that have a high percentage rate of D and F grades or withdrawals - and hires Meramec students who have already successfully completed the courses to attend the classes (of same instructor) and then, as SI leaders, facilitate study sessions outside of class. The SI leaders integrate a teaching/learning approach to solving problems, a how-to-learn with what-to-learn method, facilitating application of study strategies and critical thinking to the review of content material.

Conceptual Framework/Theoretical Foundation:

Students acquire and transfer critical thinking, learning and reading skills more effectively when learned in the context of a discipline. Based on constructivism, SI sessions allow students to construct their own learning with guidance from experienced students. SI sessions provide positive learning experiences that allow students to integrate both academic and social dimensions of the college experience, encouraging students to remain in college. SI sessions are designed around the Metacognition theory, combining the what-to-learn with the how-to-learn which in return produces self-regulated learners.

The SI program at Meramec is innovative in that it provides leadership opportunities for academically strong students who in turn assist their peers.

They receive significant training in curriculum design, cooperative learning, and small group management. One SI Leader who transferred to a state university as an education major told me that the first two-thirds of her curriculum design course was review of SI training. Community College students have few opportunities for leadership; SI has increased this opportunity significantly.

The faculty and staff, by participating in the SI program, also participate in a natural staff development process, an innovative way to encourage faculty to learn new pedagogy. Faculty and staff learn what it takes for a student to acquire skills in their disciplines. They also become involved with students, SI Leaders, on a more collegial level. Finally, faculty implement cooperative teaching and learning ideas into the classroom. The need and process of developing academic support assumes and naturally produces the development of faculty and staff.

The SI program is creative in that the supporting learning theory and pedagogy can be integrated into other academic support services and instructional settings. A couple of faculty members have incorporated SI learning strategies into the classroom. For example, one psychology professor used matrices to organize material for students. An accounting professor has her students design test questions for review. We have also adapted the SI structure to provide academic orientation. We have attached orientation seminars, facilitated by model students, to a couple of English classes. We are planning to integrate SI into a learning community Spring 98.

Indication of Success on Campus:

The SI program uses assessment to indicate student performance success and provide feedback for training and program expansion. For the past two years, SI participant groups regularly outperform non-SI groups by at least .5 course grade and have a smaller percentage of withdrawals. Our campus has also established longitudinal studies that will track subsequent credit hours enrolled and successfully completed. Mid-term and end-of-semester surveys provide feedback for training, supervision and program development. Success is also evident in the growing faculty and administrative support.

In conclusion, the SI program provides opportunities for students, faculty, and staff to grow in their respective roles in higher education and brings faculty from across the campus together to focus on student academic success.

Service Learning as an Instructional Strategy

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In August 1994, Miami-Dade Community College formally began the process of establishing an innovative service-learning program which has supported the involvement of students in an active learning experience and at the same time has benefited the communities surrounding the College. Through this involvement, students have engaged in the reciprocal process of service-learning

in which the class curriculum informs the service and the service experience in turn informs the curriculum.

Since the project began, 3,148 students have contributed 69,206 hours of service to over 250 agencies through courses taught by 127 professors. The project has achieved this success through the creative efforts of a multi-disciplinary management team, a committed faculty and administration, and a dedicated student body. The program's extensive research has demonstrated that the project has resulted in enhanced and enriched learning by students, a rekindling of spirit in faculty, a strengthened commitment to the service ethic by the overall institution, and the infusion of enthusiastic and effective service into the community.

The initial steps in creating the program consisted of a campaign aimed at promoting the philosophy of experiential education and the specific strategy of service-learning to faculty at all five campuses of the college. It also sought to identify and enlist the support of faculty who were already using community service in their teaching. Next, to establish a core of committed practitioners, the management team created a mini-grant program which provided a series of skills workshops dealing with the pedagogy's philosophy, implementation, and assessment; ongoing technical assistance; and administrative support to faculty applying the pedagogy in their classes. To date, this program has awarded forty-seven mini-grants to support faculty who have integrated service-learning into their classes. In addition to working with the identified core of mini-grant recipients, the program has supported the service-learning efforts of other faculty by placing, monitoring, and reporting on their students; conducting campus-wide reflection sponsoring regular workshops for skills development; and holding frequent "brown-bag lunches" which provided an opportunity for dialogue about current issues in service learning at the college and in the nation.

Institutional support was also key for the project's sustainability and success. In order to gain such support a formal college-wide service-learning committee with faculty, administration, and staff members was established to advise and guide the project on the institutional level. To create a stronger ethic of community service and a real life experience with service-learning, a series of "Taste of Service" events was sponsored with over sixty faculty and staff participating in activities such as feeding the homeless, working with Habitat for Humanity and visiting a local veterans hospital. Follow-up research on these events revealed that they were highly successful in promoting the ethic of service, gaining support for our initiative, and enhancing collegiality at the College.

Student voices and student recognition have played a key role in the development of this project. A "Student Ambassador" program involves outstanding service-learners in leadership positions in the Service-Learning Centers at our three main campuses. Each term, certificates and letters of appreciation are given to all students who participate in service-learning classes, and two scholarship endowments have been created to reward outstanding service-learning students.

In order to provide our students with a variety of meaningful service opportunities, the program created an academic based partnership with a network of community agencies. Non-profit agencies in the community whose missions seemed consistent with the variety of courses taught at the College were invited to participate in workshops developed to present the service-learning

strategy and the logistics of establishing an academic based partnership. Over 200 agency supervisors from 174 agencies have attended one of these workshops which are now required for host agencies.

Extensive research has been conducted to determine the effectiveness of the strategy in enhancing teaching and learning at the College. College-wide and classroom research projects were conducted on student, faculty, and agency satisfaction; student motives and outcomes; and the impact on specific learning objectives. Some indications of the success of this project include the following: Of 1,338 students 94 percent rated their experience excellent/good, and 96 percent would recommend it to a friend. Of 675 students surveyed during the last two terms, 98 percent said that their service-learning experience really helped them learn, 96 percent said that the service helped them see how the subject matter learned in class can be used in everyday life, and 90 percent said that service learning should be practiced at more classes at the College. Individual classroom research has also demonstrated success in meeting specific course objectives. In one study, Human Relations students were asked to indicate which specific course objectives were better understood as a direct result of their service experience. Of surveyed students, 96.1 percent identified effective communication, 92.2 percent indicated the area of concepts of self and others, and 83.1 percent saw a direct link to improving conflict resolution skills. Results like these overwhelmingly support the effectiveness of the strategy in enriching and enhancing learning.

One of the objectives of the Corporation for National Service grant which partially funded our project was the dissemination of information to other colleges seeking to establish similar initiatives. To this end, members of the program's management team have published seven articles in national publications, spoken at several regional and national conventions, served as consultants and designated mentors for several new Learn and Serve programs around the country, and served on national committees and boards which set the agenda for the national service-learning movement including RAND National Evaluation Advisory Board, AAHE's 1996 National Research Forum, Campus Compact's Invisible College, and the Editorial Board of *Expanding Boundaries Magazine.*

Through the synergistic creative efforts of individuals committed to academic excellence and civic literacy, this program has succeeded in developing a highly effective program at this College and has participated in the national service-learning movement to assist others who might want to replicate this model.

Shared Garden
Service Learning – A Work in Progress
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Service Learning is a teaching method that combines community service with academic instruction as it focuses on critical, reflective thinking and civic

responsibility. The Shared Garden Project at the College of Lake County (CLC) in Grayslake, Illinois is doing just that.

PHASE I - Two CLC faculty, one teaching Computer Skills (Internet) and one teaching Horticulture, have worked with 6 CLC service grant students and 25 other students from the two classes to develop service learning components that are being incorporated into the course curriculum.

PHASE II - Twenty five Internet class students are learning about the Internet by identifying appropriate websites, researching materials on line and will communicate with 25 middle students from the at-risk community of Fox Lake. The CLC students will mentor the Fox Lake students when they visit the college twice for Internet classes and hands-on demonstrations.

PHASE III (Work in Progress) - Approximately 6 horticulture students will work with the same selected middle school students to select appropriate plants, plant seeds in the middle school classroom and design a perennial garden at the Community Center in Fox Lake. The middle school students will do hands-on experiments designed by the Horticulture students both at the college (when they visit twice) and at their school under the direction of the college mentors and their classroom teacher.

PHASE IV - The Village of Fox Lake will donate plants, soil and earth moving equipment for the installation of the community center. The planting of the "Shared Garden" will be a festive celebration that will bring all college students (Internet and Horticulture), middle school students, faculty and project supporters together.

PHASE V - Care for the gardens throughout the summer will be done on a volunteer basis as college students and middle school students take ownership and continue the spirit of community service. The CLC students will keep a journal throughout the learning process to document time spent on the project, state personal goals and reflect on their experiences.

The middle school students will be encouraged through their classroom teacher to keep a notebook tracking the project from first contact with CLC students, what they learned on the Internet, the knowledge gained concerning plant life, etc., drawings of proposed gardens and reflection of their experience relating to positive role models (the CLC students).

OUTCOMES: Participant Impact

1. The Shared Garden Project will engage at least 30 CLC students in critical reflection and leadership opportunities resulting in continued commitment to community service, as evidenced by 30 percent of students indicating plans to volunteer in future campus or community volunteer opportunities as measured by registration for other service projects.

The Student Activities Office makes available a listing of community volunteer sites (currently 40+). Students will be encouraged to continue their volunteer involvement and to make a commitment to campus and other volunteer opportunities.

2. The Shared Garden Project will engage at least 30 CLC students in active learning opportunities with 25 middle school students resulting in a 20 percent increase in civic responsibility among the CLC participants as measured by pre- and post-tests.

The Sense of Community Attachment Questionnaire, as published in the Office of Substance Abuse Prevention's Prevention Plus III, will be the measurement tool.

OUTCOMES: Institutional Impact

1. Two CLC faculty and six CLC students will develop service learning components for two CLC classes that will be implemented during second semester (1997).

Outcome will be achieved by implementation of the "Shared Garden" in Fox Lake.

2. Two CLC faculty will share their experiences in service learning at two faculty in services, department meetings and/or trainings etc. resulting in anticipated commitment from five additional CLC faculty to receive training in service learning as measured by registration for future events.

Project coordinator will work with Campus Compact staff to plan a training at CLC in the spring of 1997. Success of this objective will be measured by registration of additional faculty at this training scheduled for April 2, 1997.

OUTCOMES: Community Impact

1. Participants will engage 25 middle school students in a high risk community, in a mentoring relationship resulting in a 10 percent increase in educational aspirations as measured through pre- and post-tests.

Contact hours will be recorded in student journals to document exposure to positive role models. The measurement tool for pre- and post-test will be the PEAQ (Personal Educational Aspiration Questionnaire), a public domain instrument.

2. Participants will tutor 25 middle school students in a high risk community of Fox Lake, Illinois, on using the Internet and science knowledge through experiential educational projects resulting in improved academic achievement with a 5 percent rise in science scores as measured through pre- and post-tests.

3. Participants will engage 25 middle school students in a high risk community, in a community service project utilizing skills learned in the classroom to plant a garden which will result in a 20 percent rise in students' sense of community attachment as measured by pre- and post-tests.

The Sense of Community Attachment Questionnaire, as published in the Office of Substance Abuse Prevention's Prevention Plus III, will be the measurement tool for the pre- and post-test.

Roles and Responsibilities

Supervising the project are, Micki Jones, Director of Prevention Services for the Lake County Health Department and Coordinator of Lake County InTouch at the College of Lake County and Edward J. Snyder, Director of Student Activities, College of Lake County. The two faculty members, Ellie Williamson, instructor in Communication Arts (Internet) and Don Lloyd, instructor in Horticulture, were identified to design the program based on their interest and commitment toward the project goals. Each faculty member has identified students to assist in project development and provide leadership among the other CLC students.

Administrative staff at Stanton Middle School, Fox Lake, Illinois have been very supportive of the Shared Garden project as are others in the community. The Positive Youth Development Committee, formed of community leaders, parents, business people, teachers and youth, have committed to financially support the project as well as take responsibility to secure necessary donations from the community.

In conclusion, The Shared Garden Project will have an immediate and positive effect on CLC students, Stanton Middle School students and the College Community as well as the Village of Fox Lake. We anticipate that the visible growing perennial garden will be a lasting source of pride for all who are involved and that the exposure to the College and Internet will serve as a model of what can be accomplished when college, local schools, local government and citizens groups work together.

HONORABLE MENTION

S.T.E.P. and Port Royal Housing Projects
Technical College of the Lowcountry
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The exemplary Building Construction Technology (BCT) program at Technical College of the Lowcountry (TCL) has achieved three outstanding objectives: promoting student learning and involvement, encouraging community service, and actively involving homebuilders associations on both the local and national levels.

The only college in the area that has a student chapter of the National Association of Homebuilders (NAHB) sponsored on a local level by the Beaufort-Jasper Homebuilders Association (BJHBA), the TCL chapter provides numerous learning opportunities for students in Building Construction Technology and ancillary areas. Through the national association, students have access to NAHB services, including the NAHB Library and annual builders' shows and CareerNet, a resume' service. Locally, the close relationship with the BJHBA provides exposure to

potential employers and ample activities, both educational and social, for student involvement.

One such activity is the Student Transition and Education Program, or STEP, which is a cooperative program between the home builders, the TCL's Building Construction Technology program, Beaufort County School-to-Work program, and the Beaufort-Jasper County Career Education Center (CEC). The STEP program pairs college and high school students with contractors, architects, and engineers to help promote skilled labor. "This could show teachers and students that there really is a practical application for algebra, and also train some qualified workers," said Bernie Kole of Aark Building in Beaufort, which supervises construction of the home.

"We're trying to teach students how to build houses, and the best way to do that is to actually build a house," said Richard Cappelmann, TCL Building Construction Technology instructor.

Students from TCL, CEC, and Beaufort County schools spend weekends and afternoons helping build three bedroom, two-bathroom homes that will sell for about $120,000. Proceeds will be used to fund future training programs. The first home was completed February 20, 1997, and construction will begin on the second house in about thirty days.

Jim Gallagher, executive director of BJHBA, said the major projects of building several new schools for Beaufort plus the county's booming housing market make qualified workers a necessity.

"When you import workers, it affects the cost of the project because of higher labor costs, meals, and lodging expenses," Gallagher said.

"We need to bite the bullet and go out and develop and train those workers ourselves." Subcontractors on the 1,436-square-foot home in the Telfair subdivision of Lady's Island, near Beaufort, are doing the work at cost so most of the money can go into TCL's Building Construction Technology scholarship program, which is sponsored by the Home Builders Association. Additional proceeds from the project go toward the BJHBA's efforts in promoting industry awareness and professionalism and also toward student scholarships. Two $500 scholarships were presented to BCT students at the dedication ceremony for the first STEP house.

Another successful program that has involved building construction technology students is the Port Royal Housing Project. This is a collaborative effort between TCL, the Town of Port Royal, and the South Carolina Housing Trust Fund (SCHTF). The aim is to provide affordable, energy-efficient housing for low-to-moderate income families and to train students in the house-building process. TCL and the Town of Port Royal received a $73,500 grant from the South Carolina Housing Trust Fund for the project. The Town of Port Royal acts as the banker and pays the bills, while TCL students furnish the labor. Upon completion, the homeowner then makes house payments to the town and pays taxes and insurance.

This program provides an excellent opportunity for students to gain "hands-on" experience. Under the supervision of the instructors, they build the house from

the ground up, including wiring, plumbing, and heating and air conditioning. Richard Cappelmann said, "One of the drawbacks to a student-built house is time. We work during class time and on Saturdays. It takes much longer for us to build one than a contractor. We use it as a training experience or tool. The bottom line, however, is the fact that a low-income family gets a very high quality house built by well-trained students. TCL has completed one house and is currently building a second one."

Debra Williams, the owner of the first house, is overjoyed to be in it. "I have security for my children and something that's mine," said Williams, mother of three. "I'm glad Port Royal is doing something for other people and is a caring community. I can't think of one thing I don't like about it. It's a really quiet and safe neighborhood," Williams adds.

"And," says Cappelman with a smile, "This has been a very positive learning experience for the students. They love it--they're as proud of this as if it were their own house."

SECTION II PROGRAM ENTRIES

Alternatives to the Technical Theory Lecture
New England Institute of Technology
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Contact Person: Stephanie Ferriola

New England Institute of Technology (NEIT) is a private, non-profit technical college which offers 24 associate and seven bachelor degree programs in such diverse fields as automotive technology, business management, computer information systems, electronics engineering, surgical technology, and video/ radio production. As a technical college, NEIT's mission is to prepare its graduates to enter an increasingly competitive workplace. To meet this challenge, we are first and foremost an institution committed to teaching.

The College takes pride in its comprehensive, on-going faculty development program. One of its major components is the Competency-based Faculty Development Program which was initiated in 1989. All newly-hired technical faculty, including adjunct, are required to participate and to demonstrate their ability to perform essential teaching competencies. A faculty development resource person guides the instructor through the prescribed modules and assesses the instructor's performance in an actual teaching situation through a videotaped observation. Response to the program over the years has been positive, especially from those who were hired because of technical expertise and had little teaching experience. Now "experienced" faculty voluntarily seek out the program coordinator to improve their teaching skills or to develop new ones.

As coordinator of the CBFD Program, one of Stephanie Ferriola's concerns has been the way in which many technical instructors teach theory classes. Although NEIT classroom laboratories have been conceived for the technology of the 21st century and simulate actual workplace environments, theory classes too often rely solely on the lecture, an educational model better-suited to prepare students for the 19th century factory or office. This, along with the recognition that students differ in their learning styles, prompted a new module, *Alternatives to the Technical Theory Lecture.*

The goal of this module is to encourage instructors to try a "paradigm shift," to look at how students learn from a different perspective. Learning activities that develop critical thinking and problem-solving skills and actively engage students in their own learning are designed, practiced and evaluated in theory classes. In addition, SCANS (Secretary's Commission for Achieving Necessary Skills) Competencies are used to formulate learning objectives and to measure performance or outcomes. Finally, instructors who have completed the module and developed their own activities are invited to share what they have done with other technical instructors in a workshop setting.

The range of activities that instructors have used to enhance (or in some cases replace) their lectures move from brief in-class exercises to a quarter-long group

project. For example, a simple "Think-Pair-Share" activity for Surgical Technology students required them to work in pairs to identify operating room equipment explain its function, and determine whether or not it had to be sterile. Instead of memorizing a hand-out listing sterilized items, students had to think through how and why each piece of equipment is used before deciding; in other words, they needed to understand the "system." Understanding systems is a SCANS competency that requires students to solve problems and to monitor or correct their performance.

An autobody instructor used the discovery method to teach students how to write an estimate of collision damage. Students worked in teams to assess damage on a shop vehicle and then consulted resources to determine what components made up an estimate. When comparing estimates at the end of the class, students made some important discoveries that they will not soon forget, such as, "Don't forget to add up the clean-up cost before returning the car to the customer." This group activity incorporates all five SCANS competencies and simulates an actual workplace situation.

An Interior Design teacher created a quarter-long team project that simulated the teamwork approach to solving interior design problems. Interpersonal skills and team participation held equal importance to the design concepts learned. Assessment measured individual accountability as well as group accountability, process as well as product. No final examination was given because successful completion of the project demonstrated mastery of the course objectives. Once again, all five SCANS competencies were incorporated.

Encouraging faculty to move away from the lecture and actively engage their students in learning has helped instructors to see how every student can learn and that different students learn in different ways. Enriching the theory lecture has helped to create a learning environment that both challenges and supports. In its commitment to teaching excellence, New England Institute of Technology ensures the quality technical training that is necessary to prepare students for the successful application of their craft in tomorrow's workplace.

Career-Prep Institute
Seminole Community College
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The Career-Prep Institute was started to address the retention of at-risk students at Seminole Community College's Adult High School. The primary goals are to help the students graduate and to position them to transfer to post-secondary education.

Entering students demonstrate ninth grade skills and go through an admission process that includes a battery of tests: academic skills, career interests, aptitudes and personality indicators, and a self evaluation essay. The Computerized Placement Test, the college's test for determining college readiness,

is also given at this time so that during advisement, students can be alerted to the weaknesses they will need to correct in order to make the transition to college.

Students are enrolled in a Career and Achievement Research Experience (CARE) each term, and are assigned a mentor. This mentoring experience has confirmed research which indicates that personal contact is a predictor of success in education. In the CARE course, the students choose career related projects. For example, a student who plans to be a historian, may choose to write an episode of history. Career exploration and planning are other important aspects of CARE.

The full curriculum is team developed and team taught. Interdisciplinary courses include writing, mathematics, social sciences, science, and computer technology. Students are encouraged to experience the connections among the disciplines. Stud Terkel's Working for example, provides a stimulus for essay writing. The core of the curriculum is centered on the themes of: Individual versus Society's Obligations, Role of Family Values, American Work Ethic, and Changes in the Role of Women and Minorities Within Society.

Essential competencies of the core curriculum are reading analysis and comprehension, the ability to write effective essays and messages, logical reasoning, critical thinking, and problem solving. Students progress from basic courses such as 21st Century Communications to studies in Physics and American Literature. Students learn math competencies through Algebra II.

The curriculum emphasizes competencies achieved and readiness for post-secondary education rather than seat time. Successful students will graduate within one year regardless of prior credits earned.

Thematic approaches to problem solving shift the learner from a passive observer to an active participant. In addition, students act as peer tutors for other high school students in mathematics or English. One of the best ways to solidify learning is to explain it to others.

Underlying the Career-Prep Institute at Seminole Community College is the belief that students are prepared for post-secondary education and subsequent entry into a career. The mastery of high school academics is a critical first step. Reversing trends, where self defeat and dropout trends have been an all too frequent pattern, the Career-Prep Institute students are achieving success. An 89 percent completion rate, (up from 50 percent in the traditional program), indicates that the program is making a difference in the lives of the students and the community.

A Challenging Transfer Program for Academically Gifted Students

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Throughout most of their history, community colleges have traditionally been viewed as institutions of higher learning for students coming from weak academic backgrounds and requiring some level of remediation.

However, with the continuing escalation of college costs, many students who would have never considered a community college, are now viewing community colleges as starting-off points for their academic careers because of lower tuition costs and the excellent academic reputation many of these schools possess. Their goal is to complete two years at the community college level and then transfer to a four year school.

In an effort to meet the needs of academically gifted students as well as to provide a channel for students with limited financial resources, Hudson Valley Community College undertook the development of a challenging transfer program for academically gifted students within its Liberal Arts degree granting program.

In the initial stages of this development, other honors programs at four year colleges and several community colleges were studied in detail. Eventually, the current program emerged and qualified students were actively recruited at area high schools and within the HVCC college community. Our first honors program sequence began with the Fall, 1995 semester. The Liberal Arts Honors program which emerged combines the coursework for a two year Associate degree with interdisciplinary courses in the Humanities, Social Sciences and English. These rigorous courses emphasize the connections between disciplines, critical analysis of original sources and extensive reading and writing.

Students are admitted to the Honors Program with a high school grade average of 90 or higher and an SAT combined score of 1000 or higher or an ACT composite score of 24, or, in special cases, with the permission of the Honors Program Director. Hudson Valley Community College students may also join the program if they are (1) a full-time student having completed one semester at HVCC with a 3.5 GPA; (2) a part-time student enrolled in a minimum of six credits per semester having accumulated twelve hours of credit with a 3.5 or higher GPA; (3) transfer students having either of the above. In an effort to maintain continuity, all Liberal Arts Honors students are advise in course selection by the Director of the Honors Program. Honors courses may also be taken by students who are not formally enrolled in the Honors Program with prior approval of the Program Director and the course instructor.

Students who complete the program will graduate with honors and receive an Honors Certificate with their diploma. They must have maintained at least a 3.5 cumulative GPA and completed at least twelve credit hours of Honors courses as well as the three hour capstone honors course taken during their final semester of study.

Current Liberal Arts Honors Courses include: Composition II: Writing about Literature, Introduction to Social Inquiry, Technological Foundations of Society, American Architecture in its Social Content Ideas Past and Present: The Impact of Thought on Post-Modern Society, and the capstone course entitled Foundations of the Modern Tradition.

From its inception, The Hudson Valley Liberal Arts Honors Program is committed to: intellectual seriousness and passion, excellence in the Liberal Arts Program, cooperative learning and respect for diversity.

Shortly after implementation of the program, the Director of the Liberal Arts Honors Program was contacted by representatives of Union College in the neighboring city of Schenectady, New York. From its beginnings in the late seventeen hundreds, Union College has been recognized as a premiere institution of higher learning especially within the Liberal Arts area. As with many other private colleges, high tuition rates place Union College out of the reach of many qualified students.

Specifically, Union College expressed a strong interest in developing an articulation agreement for graduates of the HVCC Honors Program. After several meetings, an articulation agreement was developed. The major provision of the agreement states that students who complete Liberal Arts Honors Program at HVCC will gain direct admission to Union College with full junior status. As of this writing, formal signing ceremonies are being planned. Both colleges plan to include mention of the articulation in their college catalogs and students who become a part of the program will receive letters of acceptance from both Union College and HVCC.

Two HVCC students are scheduled to complete the Honors program at the conclusion of the current Spring, 1997 semester. Both students will be formally recognized at the college's annual Student Honors Convocation. Efforts are currently under way to secure scholarship funding for both students through the college's Foundation Program. One of these students has applied for admission to Union College.

Future plans call for more extensive outreach programs to hopefully increase the number of entering honors students as well as seeking to increase the number of articulation agreements with other four year colleges using the Union College agreement as a model.

Collaborative Learning
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The Whidbey Campus of Skagit Valley College provides developmental, college transfer and professional/technical classes to approximately 2,000 students on Whidbey Island, about 75 miles north of Seattle in Washington's Puget Sound.

Despite its small size—or perhaps because of it—the Whidbey Campus provides an intense student learning environment characterized by close collaboration of faculty from a variety of disciplines, and an emphasis on active student learning. Through the use of Learning Communities which combine disparate disciplines, the school brings faculty and students together in a vibrant atmosphere of scholarship and investigation. The following are three examples drawn from the dozens of such classes offered at the Whidbey Campus during the last year.

- ***From the Idiot Box to The Ballot Box*** was a timely combination of Mass Media and Political Science offered during Fall Quarter 1996. Students in this 8-credit combination monitored the presidential elections, especially with an eye toward how public opinion was shaped by the media. After election day, students dissected the results and critiqued the "spin doctors." The impact of this course extended beyond the classroom, as the learning community students maintained an "Election-Central" bulletin board for the entire campus and ran their own politics web page.

- ***The Fifties***, offered during Winter 1997, was a look at American History and American Art during the 20th century, using the 1950s as a sort of fulcrum. Students became specialists in various aspects of modern history and the arts, sharing their research into such elements of social history as the impacts of African-American music on modern Rock 'n Roll, and the political legacies of Dwight Eisenhower and Joe McCarthy. Most exciting, students in this class have written a book, an oral history of the 1950s based on interviews with more than four dozen people born before 1940. The interview topics ranged from the impact of TV to reminiscences about politics. The book attempts to put these personal recollections into a larger context of research that spans the entire century.

- ***Celebrate Yourself*** is a "developmental" learning community designed to raise academic skills to college level. It is co-taught by a developmental English specialist and a member of the guidance department. Students who have tested low in at least two basic skills areas are guided into this multi-faceted support class in which they learn study skills, math, reading, English and the value of study groups and group support. Students from Celebrate, which is taught every Fall Quarter, tend to maintain this pattern of friendship throughout their college careers, giving them a college experience akin to students who enjoy the privilege of dorm life.

What Makes Whidbey Special?

Many schools do Learning Communities and other coordinated studies classes, but few do as many as Skagit Valley College, which is one of very few public community colleges in the country to require graduates to study in this manner. But the Whidbey Campus has become a sort of "seedbed" for experiments in collaboration, characterized by several unique attributes.

- ***Close faculty collaboration.*** By virtue of its compact campus, small size and lack of "turf wars," the faculty have moved to a team teaching model. More than half the full-time faculty and a dozen part-time faculty teach in collaborative classes each year. Planning begins well before class offerings and the classes themselves are taught as seamless units in which

investigation of a central question takes precedence over memorization of facts or plodding through a dry text.

- ***Active Learning.*** Seminaring, group projects, demonstrations and community outreach are the norm. So, too, is an appreciation of differences in learning styles. Through the use of faculty training ant a coordinator of instruction/general education, faculty are shown how to maintain a high level of involved learning that lets students connect to the college, to each other and to the area of study.

- ***Assessment.*** Learning Communities are more than a novelty at Skagit Valley College; they are an integral part of the College's general education program and tied to specific educational goals and outcomes. Assessment of these classes, and refinements of offerings are a regular feature of the college curriculum building. So is continual monitoring of student response via such mechanisms as Small Group Instructional Diagnosis and Classroom Research.

Educational and Professional Theatre: A Partnership

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In the past few years there has been a renewal of interest in utilizing the business community as a resource to supplement the college classroom with "real life" applications. These partnerships have traditionally been created for use in business-related and science-related disciplines. These links, however, have rarely been seen in the arts.

Seminole Community College (SCC) has recognized the advantage in extending professional association benefits to its theatre program. Last June, the District Board of Trustees signed an agreement with the Orlando Theatre Project (OTP), making SCC one of the few community colleges in the country with a professional theatre company in residence. The Orlando Theatre Project's affiliation with the Actors Equity Association, a professional theatre company for actors and stage managers, gives SCC a professional link that is universally recognized as a stamp of quality by theatre teachers and students alike.

OTP has been in existence for over ten years, and has established a solid reputation for professional theatre in central Florida. During those ten years, the company has performed in various theatres around the area, without having a permanent base of operations. SCC offered the company the opportunity to share its production and office facilities as a way of giving the theatre program a professional perspective while recognizing the advantages SCC, its students, and the central Florida community would gain from such an endeavor.

The SCC-OTP partnership offers numerous advantages to students, specifically to interact with theatre professionals on several levels:

- learn from observation what it's like to work under an Actors' Equity Association contract (i.e. the rules and regulations covering working condition for actors and stage managers in a professional company)
- have access to professional contacts that assist with future professional employment
- attend OTP workshops
- receive informal advice on audition material selection and preparation
- audition for OTP productions, as well as student productions
- apply for paid positions on each OTP show
- audition for major student-designated roles (paid positions) in SCC-OTP coproduction
- apply for OTP internships, thereby receiving college credit through SCC's cooperative learning program
- earn points toward membership in Actors Equity Association through the Actors Equity Membership Candidacy Program
- interact informally with all OTP personnel: administrators, box office personnel, actors, designers, technical personnel, stage managers, and directors observe OTP rehearsals

The SCC and OTP partnership offers a full and varied season of theatre experiences for the SCC and central Florida communities. For the current year, there are six major productions (three student productions, two OTP productions, and a co-production between OTP and SCC), as well as a series of play readings by both groups. OTP personnel also offer a series of six workshops throughout the year, open to both SCC students and area high school students. The workshops focus on practical areas of theatre such as professional aspects, improvisation, musical theatre auditions, basic makeup techniques, special effects makeup, and stage dialects. These workshops serve as supplements to classroom instruction.

With this new partnership, SCC's theatre program offers a professional perspective not associated with most academic theatre programs. Theatre students now have more options in theatre training because they can pick their own level of involvement with OTP. This is particularly helpful with community college theatre students, who frequently hold outside jobs. Students in other disciplines do not have the additional time constraint of the production commitment of theatre students and are not faced with the triple balancing act of academics, job, and production work. By offering theatre students different levels and types of involvement, they can pick what suits their current schedule and can alter their level of involvement with OTP from semester to semester.

As further evidence of SCC's commitment to cultural community partnerships, the Florida Symphony Youth Orchestra and the Seminole Cultural Arts Council also make their home at SCC, thereby extending the cultural community networking available to SCC students in art, music, and theatre.

Expanding Classrooms
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Contact Person: Professor Joan Kleinman

Service-learning and the use of the Internet are two of the many initiatives that address the paradigm shift taking place in higher education toward a more student-centered curriculum (Barr & Tagg, 1995; Batson & Bass, 1996). Indeed, both echo important national themes underscored by President Clinton and others as they seek ways to promote effective learning which connects the classroom to the world beyond. The incorporation of service-learning and the Internet into the teaching and learning process facilitates movement along a continuum from an isolated self-contained classroom to the larger local community and then to the world. Students journeying along this continuum learn different ways of communicating and through this process a new curriculum unfolds.

On the surface it would seem that the use of the Internet and service-learning have little in common. At Middlesex Community College, the Activating Learning in the Classroom (ALC) Program demonstrates to faculty how these two innovations can complement each other and be adapted to fit a variety of courses.

Teachers know that the magic in the classroom occurs when students and faculty share learning together. In Figure 1 where teachers and students are depicted as separate circles, the most excitement in the learning occurs at the intersection of the circles.

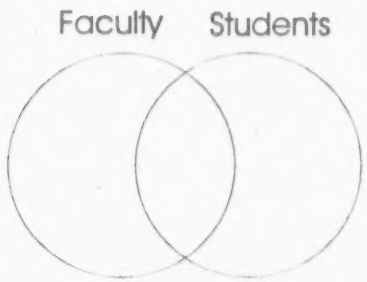

Figure 1

If the local community is invited into the classroom through service-learning or the world community is invited in via the Internet, a new circle enters the picture.

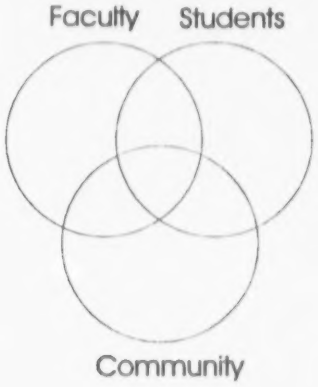

Figure 2

Two critical questions arise: what is unique about the learning that occurs where the three circles intersect and does introducing this third circle enhance fulfillment of the goals and objectives of a particular course?

To answer these questions, ALC's two faculty coordinators have developed seminars on the theory and practice of service-learning, the pedagogical uses of the Internet, and the ongoing integration of assessment into classroom practice. In the process of presenting these seminars, faculty have begun to see ways in which work on service-learning, the Internet, and assessment can complement and enhance each other. The workshops suggest ways to expand the classroom by creating new communities, new communication, and new curriculum through a combination of service-learning and the Internet.

Expanding on the work of Batson and Bass (1996), faculty examine differences in the way learning takes place through the printed text, digital media, and community settings. Each of these represents a different culture that offers unique opportunities for learners. For example, Professor Sullivan teaches statistics. When he wants to teach a basic theoretical concept, he turns to the text which presents information in an unambiguous way. Professor Sullivan uses the Internet to obtain interesting and current data for his students to use in their problem sets, and he also finds current newspaper or magazine articles with statistical issues for discussion. Using the Internet helps students to understand the creation of knowledge as an ongoing process rather than as a static and fixed product. Students in his course can opt to work in a local high school as tutors or take on research projects for nonprofit agencies; these sites provide for a more experiential, active, and multidimensional application of statistics.

In comparing the print, digital, and service cultures, faculty consider a number of trends that reflect a change in the nature of classroom learning (see Figure 3).

General Trends Across Print, Digital, and Service Cultures

Certainty	→	Uncertainty
Static Knowledge	→	Dynamic Knowledge
One Teacher	→	Many Teachers
Knowledge Relevant to Learner Alone	→	Knowledge Contributed to Others
Verbal and Math Skills Dominate	→	Multiple Ways of Knowing Share Importance
Fixed Knowledge Products	→	Knowledge Building Processes

Figure 3

These changes are in accord with the paradigm shift suggested by Barr and Tagg (1995) which focuses on the construction of knowledge, the active learning of students, the facilitative role of faculty, and an appreciation of learning environments beyond the classroom walls.

For some faculty new initiatives may mesh with their course goals and objectives easily, while for other faculty the initiatives may serve as a catalyst for enhancement of their goals and objectives. It is also true that at various times in a course faculty will be in different places along the continuua in Figure 3. Outcomes based assessment is the critical piece that validates what pedagogies are chosen and how they are implemented in courses; formative assessment provides a continuous monitoring of the effectiveness of these choices.

This new and exciting seminar series is presented under the aegis of Activating Learning in the Classroom, the primary faculty development program at Middlesex Community College. Since its inception in 1989, ALC has focused on innovative ways to place student learning at the center of the college through interdisciplinary faculty seminars and ongoing curriculum revisions. The coordinators of the ALC Program work closely with faculty but continue to teach two courses each semester in their respective disciplines. In the last two years, the program leaders and many other MCC faculty have become involved in service-learning through a grant from the Campus Compact National Center for Community Colleges. Simultaneously, the program has responded to faculty's growing use of technology and Middlesex's mandate for comprehensive assessment. Faculty have felt both energized and overwhelmed by implementing these new pedagogies. This latest initiative brings several of these important directions together providing a forum and a guided method for faculty to navigate the paradigm shift in higher education with positive outcomes for themselves and their students.

The Family Investment Education Centers
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Contact Person: Linda Cox

How is the program innovative and creative?

The Family Investment Education Centers (FIEC) are a federally funded, joint effort of Rend Lake College and the Franklin County Housing Authority to provide free GED classes, educational workshops, and job skills training to adult learners so that they might gain employable skills and become self-sufficient. Under the guidelines of the federal grant, classes are open to the general public; however, priority is given to families who live in the 686 federal housing units in Franklin County.

There are two Family Investment Education Centers in Franklin County. One is located at 406 East Main, in Benton, Illinois, and the other is located at 502 West Market, in Christopher, Illinois, approximately 7 miles west of Benton. Both the Benton and Christopher centers are housed in Franklin County Housing Authority buildings and are staffed by Rend Lake College personnel.

The staff at the Family Investment Education Centers have developed and implemented a unique, multi-component, "Partnerships in Education" program that focuses on enabling families to develop the educational skills they need to become self-sufficient. Our Education to Careers Partnership offers GED instruction, computer training, and job skills workshops, and our Building on the Basics Partnership offers pre-GED instruction so that adult learners might develop the basic reading, writing, and math skills necessary to succeed in the GED program. In addition, the Family Investment Education Center has developed a Volunteer Partnership component in which tutors work with instructors to provide one-on-one learning opportunities; a Family Partnership component that provides a wide variety of educational experiences in which parents and children participate together; and a Child Development Partnership that includes a a professionally staffed, early educational environment and on-site day care for parents attending GED classes and/or workshops.

In addition, the Family Investment Education Centers have formed a unique partnership with the local business community. The Franklin County Business and Education Partnership, a committee comprised of local businesspersons and educators, meets regularly with FIEC staff to collaborate in the development of curriculum and job skills workshops that address local employers' specific needs. Members of the committee regularly volunteer their time in the adult education classroom to create an awareness of local job opportunities, job-seeking strategies, resume building skills, and interviewing techniques.

College credit classes are also offered on site at both centers. Adult learners can earn one college credit by successfully completing a computer class that meets two hours each week, for eight consecutive weeks. The class is taught by a computer instructor and three sections are offered: two daytime sessions and one

evening session. Classes fill quickly, and plans are being made to expand this component of the program.

Since Franklin County is extremely rural, transportation is a key component of the Family Investment Education Centers' services. Two vans provide free transportation to both Centers and to the district's community colleges. The FIEC provides program participants with a vital link to the community colleges by offering on-site opportunities for students to take ASSET testing and receive financial assistance counseling. Program participants who enroll in college classes on campus are eligible for free transportation to the college as well.

How is program success measured?

The success of the Family Investment Education Centers can be measured by qualitative as well as quantitative means.

Qualitatively speaking, FIEC staff have succeeded in developing a a positive rapport with the target population and have gained their trust. We continue to offer programs and workshops that build self-esteem in a supportive educational environment for parents and children alike. As a direct consequence of our programs, many participants have gained an increased awareness of their role as parents and thus as primary role models for their children, as well as a recognition of their strengths and the validity of their life experiences. In addition, many participants have gained the confidence to seek and apply for part-time or full-time jobs or to pursue their goals of higher education.

Quantitatively speaking, the Family Investment Education Centers success can be measured by the over 200 families served initiating our family-focused educational workshops and programs in September 1995. Of this number, approximately 40 have successfully completed their GED certificate; 25 have enrolled in post-secondary academic or vocational classes at local community colleges; 1 has earned a vocational certificate; 1 has earned a bachelor's degree; 12 have found part-time or full-time employment, and 10 have moved out of federal housing.

How could the program be adopted/adapted by other two-year colleges?

Funding for the Family Investment Education Centers is provided by a federal grant and grant writing is certainly an option for any community college to fund such a program. However, many of the educational components that we offer could be adapted by community colleges so as not to be dependent upon outside funding. For example, the child development partnership could be adapted to become an integral part of the practicum within a child development curriculum.

Since volunteer partnerships rely largely upon community awareness and interest, community colleges could easily adopt this component of our program as well by enhancing public awareness through the media and/or through a speakers' bureau.

Furthermore, a business and education partnership can be developed in any community at virtually no cost. As an added bonus, an alliance such as this is often extremely beneficial to both parties. In our case, a reciprocal relationship developed in which potential employers refer individuals who need their GED to

us and we, in turn, refer adult learners who have successfully completed the GED program and who are seeking employment to them.

Finally, it should be noted that any successful educational program is the result of a dedicated team effort. Community colleges interested in adapting or adopting any of the educational partnerships described above must recognize the importance of collaborating and cooperating with various departments within their own institutions, local industry and businesses, various public and human service agencies, and perhaps most importantly, with the people of the communities whom they serve.

Freshman Learning Community
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The Freshman Learning Community is a semester-long experience for students enrolled in developmental classes. In a learning community a cohort of students works with a team of faculty in a coordinated curriculum. The theorist, Alexander Astin, says that students learn by becoming involved. Another theorist, Vincent Tinto, says the social and academic integration of students in college life are necessary conditions for retention. The goal of the Freshman Learning Community is to socially and academically integrate at-risk students into the community college.

A review of literature shows very positive results from a learning community experience. Students enrolled in learning communities have higher academic achievement, are more motivated and persist at a greater rate than non-learning community students. Studies also show that faculty are rejuvenated by the experience.

The courses that made up the first formal learning community at Black Hawk College included developmental English (Eng 091), Reading (Read 098), Career Exploration (Psych 105), Personal Development (Psych 110), and a weekly discussion group (OR 100). The faculty who taught the courses and the project coordinator made up the Freshman Learning Community (FLC) Team. The FLC Team met weekly with students during the discussion group and weekly as a team. Team meetings served to support faculty in dealing with the sometimes difficult at-risk student, as a time for coordinating curriculum, and as a time to plan discussion group activities. The weekly discussion group provided students with study skills, information about college support services, and a comfortable atmosphere in which to become better acquainted with faculty.

The Freshman Learning Community experience proved to be very successful. All results identified in the review of literature on learning communities were also found with the Freshman Learning Community. Students academic achievement was higher than they imagined it could be. Only one student dropped out of the program and that was due to incarceration. All students who completed the program enrolled for the second semester and were still enrolled as of 10th day.

Students who reported poor attendance in high school had good attendance in the Freshman Learning Community. The relationships students developed with peers and with the faculty motivated them to attend and do their homework. The faculty were rejuvenated by the experience. Students were socially and academically integrated into the community college setting.

Learning communities can assume almost any configuration as long as a cohort of students works with a team of faculty in a coordinated curriculum. Black Hawk College will expand the Freshman Learning Community to include developmental math for the fall of '97. A Pre-engineering Learning Community is also planned for fall. Discussions have begun for a Transfer Learning Community for the East Campus of Black Hawk College.

Greater Opportunities to Achieve Life Skills Program
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INTRODUCTION

The GOALS (Greater Opportunities to Achieve Life Skills) Program at Eastern Idaho Technical College (EITC) provides support services to students with disabilities as they transition from high school to adult life. Although the primary mission of the program is to serve as a bridge between high school and postsecondary training, assistance is also available in accessing adult service providers, obtaining affordable housing, and accessing appropriate benefits which will allow for independent living. The majority of students in the program are between the ages of 16 and 21.

HISTORY

The GOALS Program was initiated six years ago as a result of a follow-up study by a local school district. Results indicated an alarming number of high school graduates with disabilities were having limited success in full-time employment and independent living. Through the cooperation of four area school districts (Bonneville, Firth, Idaho Falls, and Ririe) and Eastern Idaho Technical College as well as community service providers (Department of Health and Welfare; Job Service; Social Security Administration; Development Workshop, Inc.; Community and Rural Transportation [CART]; and the Idaho Division of Vocational Rehabilitation), individuals with disabilities have been given the opportunity to obtain academic and independent living skills training beyond high school. The program is housed at Eastern Idaho Technical College and supported by funding from EITC and the four school districts.

Cooperation between public schools, EITC, and adult service providers is an integral and unique aspect of this program. Many of the individuals responsible for inception of the GOALS Program remain active on the program's advisory board, the Interagency Transition Council. As evidence of their commitment to the GOALS Program and to people with disabilities, the Interagency Transition Council agreed, in 1996, to establish the GOALS Training Fund. Utilizing

additional monies contributed by council members, the GOALS Program has sponsored national teleconferences on disability issues. This has proven to be a cost-effective method of bringing quality training to the people of Idaho Falls, many of whom could not afford the expenses of traveling to state or national conferences.

ACCOMPLISHMENTS

Since the GOALS Program's inception the following accomplishments have occurred:

- Approximately 400 students and their parents have received information regarding the GOALS Program. This has been provided through Individualized Educational Plan (IEP) and Individualized Transitional Plan (ITP) meetings, school presentations, and community presentations;
- Students have been referred to over 40 community, state and federal agencies;
- A driver's education program for students with disabilities has been initiated;
- Staff development activities have been provided for EITC's faculty; and
- National teleconferences such as *ADHD...Yes, No, Maybe; Beyond Ritalin - Issues for Adults and Adolescents With ADHD; Support Services for Students with Disabilities in Postsecondary Educational Settings;* and *Teaching the Learning Disabled in Correctional and Adult Education Settings* have been offered to students with disabilities and their families, educators, and other professionals who work with individuals with disabilities.

In 1994 a weekly seminar at EITC was initiated for students with disabilities who are involved in their high school's Work Experience Program. A team teaching approach by the High School Work Experience Coordinator and the GOALS Coordinator provides hands-on training in writing resumes, completing job applications, participating in interviews, and job keeping and survival skills. A heavy emphasis is placed on the Americans with Disabilities Act and self-advocacy skills. Not only have these high school students become more adept at discussing their disabilities, but high school officials report a decrease in students being terminated unsuccessfully from work experience sites.

BENEFITS

The most positive aspect of the GOALS Program is that students meet and work with the GOALS Coordinator prior to high school graduation. Meetings are held at the high schools and on EITC's campus so that students have the opportunity to familiarize themselves with the campus. Although the Coordinator responds to numerous crisis situations for high school graduates, the emphasis of the program is on having the supports in place prior to high school graduation. Both parents and students are encouraged to meet with the GOALS Coordinator and to become familiar with services available.

For those students with disabilities who choose to pursue vocational-technical training at EITC, the GOALS Coordinator can assist with: admission applications, financial aid applications, class scheduling, and identification and procurement of reasonable accommodations.

Another positive aspect of the GOALS Program has been the continued collaboration between adults service providers, educators, and parents and students with disabilities. Because representatives from several different service agencies act as Interagency Transition Council board members, a wealth of knowledge regarding disability issues is available to assist students transitioning from high school to adult life.

Through the collaborative efforts of the Interagency Transition Council, the Idaho Division of Vocational Rehabilitation (IDVR) placed a counselor on Eastern Idaho Technical College's campus. This was the first transition counselor in the state of Idaho; however, due to the success of this prawn, all but one of the IDVR regions in the state of Idaho now have transition counselors. Benefits of this program include easy access to the IDVR counselor for EITC students, as well as a counselor specifically framed in transition topics to serve high school students.

SUMMARY

One indicator of the success of the GOALS Program and the IDVR Program is the award that each received at the 1995 Tri-State Adult Basic Education Summer Conference at Targhee, Wyoming, and the 1995 Vocational Educators' Conference in Boise, Idaho. The GOALS Program received the "Exemplary Postsecondary Program Award" and IDVR received the "Interagency Certificate of Recognition for an Exemplary Model of Interagency Cooperation."

The primary indicator, however, of the success of the GOALS Program is the increase in number of students with disabilities who are participating in and completing full-time vocational-technical programs at Eastern Idaho Technical College. There has been a positive change in faculty attitude, and an increased willingness to provide accommodations and work with students with disabilities to identify strategies which will increase their success in full-time vocational-technical programs.

Humanities Division Portfolio Assessment Process

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The Humanities Division at San Juan College has initiated a portfolio assessment process which has significantly improved outcomes assessment for student work within the writing program, but has also provided a baseline assessment for classroom research aimed at curricular reform. The portfolio assessment process itself is centered on one over-arching goal: *writing assessments should be based on objective outcomes.* In the implementation of that goal, however, the English faculty faced two questions. First, how to define objective outcomes. Second, how to implement an assessment process that would measure student work against those objective outcomes.

Too often in the past, attempts to set "objective" outcomes have trivialized the writing process. They have focused on sentence level features of correct grammar

and spelling in part because sentence level features are easily defined and easily assessed. While no one disputes the importance of correctness, the real business of composition instruction most feel should be centered on the effective use of written language—on the student's ability to organize and express ideas and emotions to a reading audience. Of course, what counts as effective use will vary enormously with the writer's purpose and audience.

Consequently, attempts to pin down the features of "effective use" have left instructors with "guidelines" that are too often vaguely defined and capriciously enforced in the grades given by isolated faculty.

If outcomes are to be centered on the student's use written language effectively for a variety of purposes and audiences, the English faculty at San Juan College felt that a portfolio was necessary to provide a representative sample of the student's best work. Still, the faculty were left with the problem of implementing a process that would at once develop a true set of community standards and provide an assessment relative to those standards. The following process was developed:

- Students would prepare and submit a portfolio of their work twice, an abbreviated portfolio at mid-term and a final portfolio at the end of the semester. For the student, the mid-term reading serves as practice and a progress check, a chance for the instructor to conference with the student and give specific directions for improvement before submission of the final portfolio. The final portfolio serves much the same purpose as a comprehensive final exam. It culminates the student's overall progress during the course of the semester and provides an observable and measurable indication of the student's competence. In order to pass the course, the student must pass the final reading.

- The English faculty would gather together as a group to read student portfolios. Each portfolio is given an holistic reading for "meets standards" or "does not meet standards" - that is, a generalized overall assessment of competence - by two faculty members other than the student's instructor. For the instructors, the mid-term reading serves as a norming session. Troublesome papers that fall on the troublesome borderline between 'meeting' and 'not-meeting' standards are discussed in preparation for the final reading.

The portfolio assessment system has had several salutary effects. By providing an open forum for the discussion of assessments, it helps create a set of community standards against the general guidelines. Insofar as these standards are developed collaboratively and are representative of the faculty as a community, they provide a measure of the student's success independent of any one instructor's bias. Consequently, the instructor's classroom role becomes less and less that of a task master and subjective evaluator, more and more that of a facilitator and collaborator in helping the student invent for themselves effective strategies in the use of written language.

As an independent assessment, the standardized assessment process provides baseline data not only for the assessment of individual student competence, but also a means of process control for the continuous improvement of teaching practice. In traditional models, where the instructor is the sole evaluator of a

student's work, the norm is uniform instruction and adaptive evaluation. All students receive essentially the same instruction, and the special needs of individual students are addressed less in adaptations of the instructional method, more in adaptations of the instructor's assessment. With the implementation of the portfolio system, however, where a community of faculty serve as the evaluator of the student's work, the norm is reversed. Students receive adaptive instruction to a more uniform evaluation. Consequently, we have been able to implement more rigorous classroom research models addressing the effectiveness of instructional methods both as a part of individual teacher's reflective practice and as a part of institutional assessment. To take just one example, comparisons of the success rates of students have sparked significant revisions within the developmental curriculum to help better prepare remedial students for college level writing.

I-AIM Program
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Increased student retention, enhanced student satisfaction, early completion of degree requirements, and maximum utilization of the department faculty, resources, and physical plant...only in an ideal world? This all will be possible with the awarding of a federal FIPSE grant for the implementation of the I-AIM Program. The Drafting/CAD Department of Alfred State College-SUNY has developed an Instructor Assisted-Individual Motivated Program (I-AIM) Program which will enable students to enter our successful programs at many points throughout the year and progress at their own pace with the continuous assistance and individual instruction of a department faculty member.

This FIPSE grant will be to develop all course outlines and related instructional materials needed. The program will be comprised of separate instructional modules. The modules will be comprised of a student work-guide notebook and all the lesson materials that will lead the student thorough a series of lessons. These lessons will be presented on video tape, CD-ROM or other instructional media along with reading and other appropriate assignments. Drafting projects will also be listed at the end of each lesson. The major difference between the I-AIM program and other self-paced programs is that the drafting faculty will be present in the lab to give instant feedback to all work produced and be available to answer questions as they arise. The student will be required to attend class each day just as they will be for a traditionally structured class.

This program has many advantages:

- Students could enter the program at many points throughout the year. As a seat becomes available a new student could enter the program which will result in more effective utilization of the equipment and facilities of College.

- Students will be able to progress at their own speed. This individual motivation will serve both fast and slow students. The accelerated student will not be restrained and could complete the program in less than the customary 22 months. The slower student would also benefit. They will have the extra time available (within reasonable limits) to comprehend and complete the material. Also, students can leave the program at any point for personal or economic reasons and then return to pick-up their studies where they left off.

- This system would also accommodate externships and co-op programs with industry.

- Remediation for educationally disadvantaged students can be front-end loaded. The student could then start the regular program whenever remediation was completed.

When the second year option is selected, the student can be offered a selection of modules that would best suit their career goals. This will be possible by offering eight or nine modules with the student required to complete any six, or the student may choose to complete more than the required number.

We are excited about the I-AIM Program and the opportunity that this FIPSE Grant which was awarded in June 1996 has afforded us.

Work on the project has already begun with the first class expected to begin in January 1998.

New Thoughts on Internships for Practical Nursing

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Rapid changes in health care systems have required changes in how we educate Practical Nurses and other allied health workers. To proactively meet this need, the Practical Nursing Department of Hennepin Technical College of Minnesota has altered the traditional program to allow more flexibility and innovation. Students are able to enter and exit the Practical Nursing Program with different skill levels and with different long-term goals for further education

Trained Medication Aide (TMA), Home Health Aide (HHA), and School Health Professional certificates were previously offered as stand-alone training in our industry-based customized program. By incorporating these certificate classes into the Practical Nursing program, the relatively low incident need of the health care community TMAs and HHAs is being consistently met, while Practical Nursing students have opportunities to earn higher wages while continuing their Practical Nursing Education

The Practical Nursing clinical experiences were restructured to improve employment opportunities for new graduates. Historically, students received their clinical experience in acute care hospitals and long-term care nursing homes. In 1996 the program expanded the clinical experiences so that all students have the opportunity to learn in an acute care hospital, long-term care nursing home, family practice clinic, and a site which is the student's choice.

The student choice option was developed by networking with community health care delivery sites to meet two objectives: to identify where Practical Nursing graduates are hired and to determine the skills needed for success in the work place. The clinical experience is for five weeks, five days a week. Students choose from one of the following community-based sites: homeless shelter clinic, urgent care clinic, rural hospital, blood bank, long term mental heath facility, acute detoxification facility, home care, or hospice.

Each student has a mentor at the clinical facility. An HTC faculty member visits each student at the clinical site during the five-week experience to evaluate their learning and to confer with the site staff. This situation provides an invaluable service by allowing students to receive individual guidance from a current, highly qualified mentor. In addition, the sites offer students exposure to the high technology, state-of-the-art equipment which is being used in today's changing health care delivery system.

The student evaluation process is triangular. The mentors evaluate how well the students met performance standards which were co-developed with college faculty; the students evaluate how closely they met their predetermined self-goals; and the HTC instructor evaluates developmental skills. The students are also asked to complete an evaluation of the clinical experience as well as write a paper describing their personal learning. The students have indicated that this evaluation process piques their interest and promotes intense, highly motivated learning in an environment which is less stressful than on-campus simulated clinical situations.

Our partnership is working and success is well documented. The community health care delivery system is offering employment to our students before or upon graduation. Clinics are contacting Hennepin Technical College and volunteering to become clinical sites. One hundred percent of our most recent graduates passed the Minnesota State Board of Nursing licensure test the first time they took it.

These partnerships are teaching us how the college, community, and students can benefit from shared resources. Students are receiving state-of-the-art skills training and industry is getting highly skilled, multi-level employees. Students are employable at an earlier stage, have opportunities for individual mentoring in clinical settings, experience a wide range of specialty training, and have direct links to employment opportunities. Facilities have the opportunity to train potential employees and directly influence curriculum. A potential outcome of these partnerships is that patients will receive superior care due to staff having the chance to sharpen their skills while mentoring students.

Future plans include adding more expanded certificate programs and developing more partnerships which will include cross-training for multi-level skilled health care workers. These certificate programs will be laddered within the Practical

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Nursing diploma program so that students can potentially articulate to other degrees. Certificate programs which take less than six months and train to varying skill levels meet the needs of industry, while also meeting welfare reform requirements for training and back-to-work programs. Certificates also allow students to continue their education through different levels without repetition of curriculum.

Pharmacy Technician: Distance Learning Project
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Many states have recognized pharmacy technicians as a vital part of the health care team for some time. Until recently, the pharmaceutical community of Mississippi had ignored the importance of a well-trained technician and this national trend. Implementation of a National Certification Examination for Pharmacy Technicians was the catalyst for change to take place in the state.

The Pharmacy Technician Program, opened in 1994, offers an Associates Degree in Applied Science, and graduates are eligible to take the National Certification Examination. The five semester program combines classroom instruction with simulated lab experiences and clinical rotations in hospital and retail pharmacies. It is the only program of its kind in the state. It has an active Advisory Council with representatives from different parts of Mississippi and Louisiana. The program was nationally accredited in 1996 by the American Society for Health-Systems Pharmacists, the professional accrediting body for pharmacist technician programs.

As the popularity of the program grew, so did the number of needed faculty and enrolled students. The State Board of Pharmacy permits each licensed pharmacist to have two pharmacist technicians working under their supervision. When the state's only School of Pharmacy changed its curriculum from a five year to a six year program, a shortage of licensed pharmacists was anticipated, along with an increased demand for well-trained Pharmacist Technicians.

The College entered into an agreement with Northeast Mississippi Medical Center in Tupelo, a large metropolitan area in the northern part of the state, to provide a distance learning option for the employees of the large pharmacy department. In August 1996, the first group of students was enrolled in the Distance Learning Project.

This initiative is unique because it integrates many innovations in technology, collaborative learning, and outcomes which address a health crisis of limited health care workers in rural areas. Students receive their orientation and some classes over the Community College Network (CCN). This is a television network between the fifteen (15) community colleges in the state. This allows students to enroll and participate in programs not available in their district. The CCN was partially financed by the Rural Health Corps (RHC) Grant from the U.S. Department of Agriculture. Many pharmacy technician students (80 percent) are

under Rural Health Corps Scholarships and have agreed to work in rural areas after graduation.

The admissions and graduation requirements for the program are the same for the generic and distance learning students. However, the distance learning students must be employed in the pharmacy career field and have an approved pharmacist preceptor at their site. These students cannot reside within ninety (90) miles of a Community College offering an Associate Degree in Pharmacy Technology.

Collaborative learning is demonstrated when the students journey to a designated community college in their area to take unit and final course examinations and for classes over the CCN Network. The designated staff at this community college proctor examinations and mail them to the Program Director at the Jefferson Davis Campus. Additionally, they receive and distribute assigned textbooks and materials to the distance learning students.

The successful outcome of this innovative service learning project is a group of graduates of the Mississippi Gulf Coast Community College Pharmacy Technology Program who are eligible to take the National Certification Examination and go to work in their community as a well-trained health professional with a college degree. Adult learning principles are fostered in situations where students can learn new skills and earn a living for their families. The distance learning option and Pharmacy Technology curriculum could be implemented in other geographically similar states or areas with limited number of registered pharmacists.

Quality Control through Syllabi

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With the motto "learning is our business," Edison Community College has embarked upon a long-term and college-wide effort to make student learning the focus of all activities and to improve the quality and quantity of student learning. One of the most significant and useful tools used in that effort has been a comprehensive syllabus for each course.

In 1988 a faculty committee began studying the purpose and potential focus of the course syllabus and in 1991 issued a report which has become the guide for revising all syllabi. The faculty determined a syllabus to be a "road map for learning" and defined the Edison syllabus as a three-part document. Part One is a relatively stable section which outlines general course goals, required texts, and other required materials. It is distributed to students in all sections of a course and copies are kept in a public file where any student can access them in order to get a better understanding before enrolling in a course.

Part Two outlines specific assignments, evaluation methods, and class policies. This section, too, is shared with students but usually differs from instructor to

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instructor. The syllabus guidelines, however, provide assistance to faculty in terms of writing class policies. The faculty committee researched syllabus legalities and has helped all faculty to write syllabi that address attendance, academic honesty, students with disabilities, etc.

Part Three is written for faculty only and particularly for the ever changing cadre of adjuncts. It outlines the learning outcomes; classifies these outcomes as cognitive, affective, or psychomotor, and addresses both content and intellectual skills. Learning activities are suggested for each outcome and sometimes are accompanied by rather eloquent discussions as to why technique A works better than technique B. Available materials may include audio-visual resources, library holdings, software, lab resources, etc.

Part Three also provides guidance as to how evaluation should be accomplished. The number and type of tests are recommended. If the full-time faculty require a specific project (particularly in capstone courses), instructions for the assignment are included.

To accomplish this college-wide effort, all full-time faculty were offered training and assistance in writing their syllabi. Early successes were shared with other faculty. Administrators were careful to share multiple and very different examples so that faculty would feel free to be creative in their own syllabi.

The implementation of the syllabi has been slow and iterative. Some faculty quickly wrote outstanding documents; others have struggled to identify outcomes and to link activities and outcomes. In some disciplines, the very process of writing course outcomes led to a revision of the entire curriculum and deadlines were given long extensions to accommodate that effort. Some disciplines had no full-time faculty and associate deans had to train adjunct faculty. Adjuncts were paid $200 per syllabus for their work.

What did we learn from the process?

Students have much clearer and consistent learning guides. They know the expectations. Student complaints are more easily and quickly adjudicated because the clarity of instructions and policy statements has made it much easier for faculty and deans to resolve issues with students.

Adjuncts have much better guidelines on what and how to teach. Faculty and associate deans have saved a great deal of time since they need not orally explain each course to each adjunct. By standardizing expectations for outcomes across sections, Edison has taken an extremely significant step toward better quality control.

Transfer has been facilitated. On several occasions, Edison advisers have sent Part Three of the syllabus to a four-year institution to demonstrate that the course's outcomes do indeed match the four-year college's course and that transfer credit should be granted.

Finally, the syllabus greatly helped the College address outcomes assessment. Course outcomes fed directly into program outcomes and their specificity has helped in identifying appropriate al instruments. The original syllabus committee's insistence that both content and intellectual skills be included has

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been most helpful in leading the College to more emphasis on high order thinking.

The syllabus project has thus been not only a tool to aid students learning but one to enhance the learning of faculty and administrators. And while many of us would like to declare the syllabus project "done," we know that, as a learning organization, the improvement and refinement of each course's syllabus will be a continuing process.

Reading Laboratory
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Contact Person: Nancy Stone-Sokoloff.

Miami-Dade Community College - Wolfson campus has established a Reading Laboratory course for learning disabled students deficient in basic reading skills due to their disability. The mission of this course is to improve the reading skills of individuals by starting at each student's reading level and compensating for one's weaknesses while building on one's strengths.

A specialized curriculum has been designed and implemented by Nancy Stone-Sokoloff, M.S.Ed., Learning Disability Specialist in the A.C.C.E.S.S. (A Comprehensive Center for Exceptional Student Services) Department. The course outline focuses on instructional reading levels through the sixth grade, basic skill deficiencies, and students' preferred learning styles. Phonics is an essential component of this program, as it is the foundation used in building basic reading skills. This is a structured, step-by-step process geared to remediate basic skill deficiencies at each student's pace. There are no time constraints or deadlines to teach a specific concept. The objective is for the student to fully comprehend information taught in class.

In April, 1996, statistics were tabulated to reflect the progress of students enrolled in this course. Based on eighteen participants, results indicated: seventy-eight percent (78 percent) advanced in one or more reading levels each semester and twenty-two percent (22 percent) advanced within their reading level. Therefore, one-hundred percent (100 percent) demonstrated progress in the class. Forty-four percent (44 percent) of these participants are currently enrolled in college level coursework. These results reflect the success students have achieved in this Reading Laboratory class.

Students are recommended to enroll in the Reading Laboratory course if they have low reading skills due to their learning disability. Referrals for the Reading class are received from Miami-Dade personnel for students currently receiving assistance through the A.C.C.E.S.S. Department; students from the feeder high schools' exceptional education programs; and disabled clients from community agencies, such as the Division of Vocational Rehabilitation.

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Before students begin the course, reading pre-tests are administered to determine their current reading levels, as well as strengths and weaknesses in reading skills. The diagnostic pretests are: The Woodcock Reading Mastery Test-Revised (Form G), which assesses several aspects of reading and provides a comprehensive basis for systematic program planning and The Woodcock Johnson Tests of Cognitive Ability, used to measure intellectual ability, including long and short term retrieval, auditory and visual processing, processing speed, comprehension knowledge, and fluid reasoning. Results derived from these tests are utilized to create individualized lesson plans that focus on the student's strengths and weaknesses, as well as one's preferred learning style.

Specialized instruction is taught in small groups, approximately four to five students based on their instructional reading levels. This form of instruction provides intensive and individualized intervention. The instructor develops daily lesson plans, which include the following reading skills: using word recognition skills to assist students in decoding printed words to comprehend materials; sequenced reading skills; the utilization of visual, auditory, and haptic aids to enhance comprehension and other reading skills; intensive vocabulary instruction to define words and decipher words in context; teach spelling by reviewing memorization and visualization techniques to assist students in locating, organizing, interpreting, and retaining information using the SQ3R (Survey, Question, Read, Recite, Review) study skills strategy. Practical life skills are emphasized in the materials selected for this course. Examples include: learning how to read street signs, filling out job applications, reading the newspaper for current events and to enhance one's vocabulary, career exploration activities, and computer literacy skills.

Intervention techniques, teaching strategies, and multisensory approaches are used to improve students' weaknesses in reading skills. Modifications in teaching strategies are made according to students' learning styles, such as constant repetition of concepts, breaking course materials into smaller intervals, using visual (handouts, flashcards, videos, diagrams) and auditory aids (audio cassettes, videos, speech synthesizers on computers) to reinforce concepts. Educational materials and software are chosen to complement each student's strengths and weaknesses.

A laboratory component has been integrated into the curriculum to complement and reinforce classroom instruction. Specific multisensory activities which focus on each student's learning style are assigned in the laboratory setting. Students work on computer software programs which are at their current reading levels. Examples include The A+ Series, a program that assists lower level readers in developing and strengthening basic grammar concepts, word usage, phonetic sounds, and spelling. They also use the Word Scholar, a multisensory tool designed for individuals with learning disabilities. This computer program, in conjunction with a speech synthesizer, highlights important concepts visually and auditorially in a simultaneous fashion. With Word Scholar, the text on the screen is spoken one word at a time. As each word is spoken, it is highlighted.

Activities to monitor students' progress during the course includes reading inventories (Qualitative Reading Inventory, Rosenthal Diagnostic Phonics Assessment) to determine current reading and skill levels, as well as weekly quizzes and/or examinations, assignments, and post testing.

A post-test is administered at the completion of the reading course to determine the students' current reading levels. The Woodcock Reading Mastery Test-Revised (Form H) indicates the current level of achievement in the following areas: basic skills (word identification and word attack, and reading comprehension, word and passage comprehension). A full scale reading score will be derived from these test clusters, indicating the overall instructional reading level for each student.

Students reaching a sixth grade level or above in the overall reading score are mainstreamed into college preparatory coursework. Participants who have not reached the sixth grade level of reading have the opportunity to repeat this course. Curriculum modifications, classroom accommodations, and specialized testing arrangements are discussed with instructors in mainstreamed curricula.

Based on the statistics and feedback from instructors and students, the Reading Laboratory course has been quite successful. While many colleges claim they have programs for learning disabled adults, they only provide regular support services. These services lack the individualization, intensity, regularity, and coordination required to help learning disabled students succeed. (Mangrum & Strickhart, College and the Learning Disabled Adult, 1984). The Reading Laboratory course fulfills these components.

This course addresses the needs of learning disabled students, deficient in basic reading skills, requiring remedial instruction customized to their individual needs. In other words, this specialized and individualized instruction will facilitate learning despite their disability.

Regional Interior Design Program Model

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The Regional Senior Design Program is a consortium of six community colleges which have developed a multi-level, interdisciplinary, and accessible interior design program which graduates students with the competencies required to enter the profession of Interior Design. All courses are fully articulated at all six colleges and a baccalaureate degree has been articulated with California State University Dominguez Hills. The participating colleges are Orange Coast College, Fullerton College, Santa Monica College, Saddleback College, Long Beach City College and Mt. San Antonio College.

The benefits of the regional program to the students are the accessibility of the courses, multiple exit points, opportunity for specialization and exposure to more than one professional viewpoint. A multi-year calendar has been developed to ensure that the courses will be offered at a minimum of one college in the consortium each semester so that students are not delayed in pursuing their career goals. This also improves retention of students in the program. Multiple exit points allow the students the opportunity to enter the profession at the merchandising level while completing their professional design degree.

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Two of the major goals of the Regional Interior Design Program were to develop cultural sensitivity and to provide application within cultural contexts and to promote the concept of universal design accessibility. The design studios are arranged to be fully accessible to students with special needs and the program works with all campus constituencies to provide support services to students with special needs including physical and learning disabilities. International recognition of the program has enriched the cultural diversity by attracting foreign students to the program. The international students help to influence the cultural awareness and sensitivity of the native students.

The Regional Interior Design Program was developed in partnership with practitioners from the profession of Interior Design and faculty from the six community colleges. The curriculum was developed to meet the standards and guidelines required for program accreditation by the Foundation of Interior Design Education and Research. Twenty-three courses were revised or developed new and fully articulated and approved at all six campuses through the curriculum review and approval process. The curriculum was developed to meet the current and future needs of the profession and industry while maintaining rigorous academic standards. SCANS, workplace relevant and academic skills were integrated throughout the curriculum. Work site experiences were developed according to the hierarchy of workplace learning starting with information interviews in the career class and culminating in an internship at the end of the program.

Business and industry leaders were partners throughout the development of the program and have participated in the design of a rigorous and relevant curriculum which meets the needs of the profession today and in the future. The program also offers lifelong learning opportunities for practitioners which are required for maintenance of professional level membership in design organizations and for certification renewal.

Instructional methodologies have been developed to improve learner productivity by utilizing "learner centered" project learning, process learning, self or team managed classrooms and to support active learning. The faculty are knowledge facilitators rather than the traditional "chalk and talk teachers." Technology has been integrated into every class to achieve flexibility and access to learning utilizing technology as a tool. Students are encouraged to develop innovative solutions to new problems and each class is to focus on and document the decision making process used in creative problem solving. Team projects have been designed to promote cooperative learning and omni-directional information flow. Standards of performance have been determined and will be documented in student portfolios and review of student work by practitioners and accreditation site visitors.

The program has been asked to pilot an interactive distant learning project because the curriculum is approved and fully articulated at all six colleges. The History of Design and Furnishings will be offered utilizing interactive video transmission in the Fall of 1997. In addition, the faculty are working to form partnerships with textbook publishers to develop other distance learning technologies such as CD-ROM and Internet delivery of instruction.

The benefit to the faculty has been the collegial spirit of the group, revitalization of experienced faculty members, and development of a resource guide which was

compiled during the process of curriculum development and sharing of ideas for projects and teaching strategies. Participation in the project has also improved the visibility and recognition of the design programs on the individual campuses, in the community and among the professional design associations. The institutions have benefited from the recognition for their participation, revised curriculum, increased enrollments, revitalized faculty, and a model for regionalization of other programs and services. This model and the process utilized to develop the program are being duplicated by other colleges in California and across the nation.

This creative and innovative program model has met or exceeded all of the goals to develop and implement a multi-level, interdisciplinary and accessible program which benefits the six colleges, students and the profession of Interior Design.

Researching Innovation for Teaching Excellence
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Itawamba Community College is committed to excellence in the teaching-learning environment. As part of this commitment we have embarked on the project "Researching Innovation for Teaching Excellence" (RITE). The purpose of the RITE project is to find the best national instructional practices in teaching and learning and applied academics, communicate them through our publications and faculty workshops, implement them at our college, and then disseminate them to other colleges and schools.

RITE is developed around two main goals. The first is to provide professional development by improving the pedagogy of the teaching faculty and thus to improve the academic and technical competence of all students through improved teaching practices. To this end ICC will prepare and publish its model of teaching excellence based on our implementation of teaching practices and gleaned from our research. The second goal is to establish a Research Center that will serve as a dissemination point for research in the most effective methodologies in teaching methodology.

Instructors representing the fields of math/science, communications, and technical/vocational and administrative staff researched the most effective, data-driven methodologies in teaching pedagogy. They identified those teaching practices that are most effective in the delivery of high quality academic and technical instruction and persons with expertise in those practices and compiled them into a single resource entitled The Bibliography of Research in Teaching Excellence. This bibliography is the major resource for the Research Center for Teaching Excellence located on the ICC campus. Though the Research Center was established to assist ICC faculty in developing their own expert skills, its intended use is for networking with all statewide community colleges and educational institutions. It is available on the Internet through the ICC web site.

The Research Center for Teaching Excellence at ICC is functioning as a working group of interdisciplinary teaching faculty who explore new teaching techniques and share successful strategies in teaching improvement. Using the bibliography, the Center has selected model programs and teaching practices consistent with current research-based concepts of teaching and learning to implement into the ICC academic setting. The next step was to make available to the ICC faculty these identified persons and their expertise. This is an on-going effort and has been accomplished to date through faculty attendance at national conferences, seminars, and workshops as well as college sponsored workshops.

Since September 1996 the Center has held bimonthly focus group meetings on campus to provide leadership in development of innovative teaching practices and to stimulate conversations about effective teaching and learning. For example, after the Center identified Patricia Cross and Thomas Angelo as "experts" in the area of classroom research, a focus group reviewed Cross and Angelo's (1988) Classroom Assessment Techniques: A Handbook for College Teachers, which provides teachers with a wide variety of classroom techniques to collect feedback on how students learn and how they respond to various teaching approaches. Each member selected at least one CAT to utilize in her classroom and demonstrated successful examples of how different instructional techniques were used. One math instructor found an eighty percent improvement in classroom test scores after using one of Cross and Angelo's classroom assessment techniques. Each instructor recorded these techniques in a teaching portfolio that included her results and her revisions. The next step was for each faculty member to disseminate the results of her own classroom-based research to her department colleagues. By sharing these experiences, the faculty engaged in an ongoing, non-threatening exchange about the effectiveness of different teaching methods and practices.

Focus groups also discussed teaching and learning styles and the changing roles of teacher and learner. Tools used in these groups were Learning Style Inventory, teacher self-evaluation procedures, and instructor/student skill assessments. This was followed by a study of instructional design, student-centered learning, and team learning. Other topics addressed were total quality management principles in the academic setting (the LEARN program) and collaboratives in the teaching-learning environment.

The ICC math department is beginning to use parts of a mentoring or "shadowing" program developed through the American Mathematical Association of Two Year Colleges, another expert identified in the RITE Bibliography. That work involves training students to work with high school and elementary students, not in a tutoring capacity, but in a "hands-on" mode designed to help college students as they train for teaching professions. That program also has non-math majors interviewing people in business or industry in their major area to see how mathematics is used in that profession. This applied approach then helps math faculty make the class work immediately meaningful to students in their college math courses.

A new area that the Center is investigating involves a "Collaborative Approach to Teaching and Learning." This is a collaborative that establishes a partnership between universities and two-year colleges to address the need for recruiting and training students for careers in teaching elementary and secondary mathematics and science.

The anticipated outcomes from the RITE project include a positive increase of ten percent or more, as compared with the previous year, in the areas of (1) student evaluations of instruction, (2) retention, (3) graduation, (4) enrollment, (5) standardized tests, and (6) transfer to senior colleges. Subjective evaluation measures will be an increase in the college-wide sense of community and the establishment of exit standards. Within the next four months ICC will have published its own model of teaching excellence based on the knowledge gained from the project.

A Student Learning Partnership: The Writing Lab, Students, and Graduate Lab Assistants

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Del Mar College keeps pace with emerging technology and ideas. With departmental replacement plans in place, our computer labs have gradually become state-of-the-art networked environments. However, it is in the Writing Center at Del Mar College (DMC) where the unique melding of human resources, local higher education collaborative efforts, and technology has resulted in successful student learning outcomes for DMC developmental students.

The DMC Writing Center is the English Department's commitment to the promotion of active learning in order to encourage student ownership of learning and to facilitate the improvement of teaching and learning via hands-on instruction and collaboration with others. It has two exemplary components: *One-Hour Labs* and, in recognition of the need to employ quality trainers of technical writing skills, an innovative partnership with the local university, Texas A & M University - Corpus Christi (TAMU-CC) to recruit TAMU-CC English graduate students for employment as lab assistants in the labs.

The *One-Hour-Labs* component is a writing lab whose curricular goal is to provide for students practical experience with writing, especially emphasizing the aspects of writing that are best exercised on a word processor or on a network and generally cannot be conveyed in the classroom. It relies, to a certain extent, on the dynamic that develops in each individual section, the amalgam of the writing needs and desires of each group of students and of the strengths and inclinations of each Lab Instructor.

The One-Hour Labs are extensions of our two developmental English courses and of our Freshman Composition course. Students in these courses are required to attend one-hour-per-week computer writing labs for 15 weeks. While at many colleges some composition classes are taught in computer classrooms, or students can drop in to a computer lab to complete work, there are few places where a mandatory computer lab with its own composition curriculum is required of all composition students. One goal of the program is to empower all students by giving them enough skill on computers to allow them to begin to use them for the writing they do in college. Through the weekly labs, they experience hands-on

practice with the components of writing that networked computers especially foster, such as fluency, audience awareness, collaboration, and revision.

Elements of the One-Hour Lab Curriculum:

1. **Audience** - In the classroom, students and teachers read and talk about audience; in the Lab, students spend part of their time writing real texts to a real audience: their labmates and Lab Instructor.

2. **Network** - Both in college and in their careers, students will increasingly need to know how to write on a network. For many of our Lab students, certain Daedalus features serve as introductions to the Internet. Instructors are encouraged to write when the students are writing, and Daedalus' E-Mail and InterChange features allow students to see good as well as poor writers in their audience.

3. **Ideas** - Writing cannot be separate from content: Lab students spend some of their time talking, but most of it writing about real subjects and issues, thus generating the content that is rendered into written discourse in the labs.

Surveys given to students in the computer writing labs at the beginning and end of the semester show that, over the course of the semester, there is an increase in the number of students who say they prefer to write assignments with a computer; an increase in students' awareness of how to identify needed changes, how to make necessary revisions, and how to change their writing to appeal to different readers. Finally, we have found a slight increase in the number of students who say they like writing and a larger increase in the number of students who report that they feel confident about writing essays.

The *TAMU-CC and DMC partnership* is a recently emergent cooperative relationship developed between the two institutions to accomplish learning goals. Specifically, the following collaborative activities have linked the DMC Writing Center and TAMU-CC's faculty, staff and graduate students.

1. Faculty, promoting a unified effort in fostering collaboration between the two institutions, co-present at conferences, such as the National Council of Teachers of English, on shared ideas and innovative non-traditional teaching strategy.

2. The Tutor Exchange is a program between TAMU-CC's Tutoring and Learning Center and DMC's Writing Center begun on a limited basis in Fall 1995. The program's goals include provision of consistency for students who are transferring from DMC to TAMU-CC via consistency among tutors at the two facilities and contribution to the liaison between TAMU-CC and DMC.

3. TAMU-CC English Graduate Students, upon the recommendation of TAMU-CC Freshman Writing Program professors, are hired by DMC to teach in the English Department's 200 One-Hour Lab sections offered each semester. Graduate student lab assistants tend to be energetic, are student-oriented, and trained in TAMU-CC's composition program. They undergo a formal interview process for prospective lab assistants and participate in training workshops provided by the DMC Writing Center staff before the labs

commence. They teach between one and nineteen one-hour sessions each week (depending on level of experience and flexibility of their schedules) and are paid above minimum wage.

The current cooperative arrangement which allows five first-year graduate students in the Texas A & M-Corpus Christi English Department's Rhetoric and Composition Program to be hired as One-hour Lab instructors or tutors in Del Mar's English Learning Center has been so successful that TAMU-CC has proposed that the current informal employment agreement be formalized and a representative from the Del Mar Writing Center serve as a member of the TAMU-CC Graduate Student Selection Committee.

Success indicators such as survey findings and the formalization of the intra-institutional partnership have motivated the College to replicate the model in two other disciplines working on development of students' basic skills, the Mathematics and Physics Department and the ESOL and Reading Department. The program would be easy to adapt by other higher education institutions wherever community colleges and universities co-exit.

Title III Learning Styles and Related Achievement in Chaffey College Classrooms
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Under the aegis of a Title III grant, Dr. Purkiss generated a one year project in which he gathered 21 faculty members and the Library into a model study. Initially, he taught a workshop in the practical usage of learning styles in the development of daily pedagogical strategies. Then, using the Kolb LSI II-a, a short but reliable learning styles inventory, he surveyed nearly 1,000 students in the classes and in the Library for their learning styles. Combining that information with data from the MIS including the students' ages, ethnic grouping, and gender, he proceeded to identify for each of the teachers, their student learning style profile in the sample classes, and how that profile performed academically. He arrayed the data so that the samples could be examined by the control variables of age, race and gender. After the semester was completed and the data analyzed, he presented each teacher with a detailed report of their class and their success with learning styles.

The group of teachers participating were not all believers in the concept of learning styles and their validity in developing pedagogical strategies. But, because the study showed clear and empirical results, many of the most skeptical were also convinced to change their approach to the classroom and to "teach around the circle of style." Teachers came to see that while they might be sensitive to race, gender and/or the age of their students, they were often teaching to a certain style of student and leaving a whole group out. When the data might show that the grading seemed equal across the general groups by age, race or gender, when the data was arrayed by style, the biases would immediately

become evident, sometimes by as much as a full grade point difference between style groups.

The Library was able to assess the array of learning styles of the students who utilized the facility, and are now developing plans to become more inclusive of those styles that did not seem to show up in their regular client-base.

1. In terms of innovation, this approach is unique. Except for Dr. Purkiss' dissertation which utilized a large sample of community college students, this is the first time that a study examining a large cross section of student learning styles and pedagogical strategies has ever been done at the community college level. The fact that Dr. Purkiss purposely utilized means as the primary statistical tool made the study accessible to all faculty who participated, no matter what their statistical competence.

2. This is a process which is easily adopted and may be proposed for a statewide model here in California. The inventory involves only 12 questions, can easily be administered, and the other data is in any college's Management Information System. Also, the project is an easy one to institutionalize at both the individual classroom level and for the entire institution. If the project is deemed to be useful by a college, the test can easily be inserted into the student entry testing program (matriculation) and the other data are in most cases already being collected. A large number of the teachers in the study are going to continue to test for learning styles in their classes as a part of their on-going classroom research.

3. This process is highly indicative of student success. It is powerful because it allows for the identification of student samples by a number of different qualities and then provides clear indications of the effectiveness to the teacher about the validity of their particular pedagogical methodologies in relating to the different learning styles. This process has shown many teachers who truly believed that they were very open teachers and that there were simply "certain students who just can't get it," that they have not been teaching in a manner that is honestly inclusive. It also provides a clear set of guidelines on just how to adjust their pedagogical strategies to become so. A number of other teachers on campus have contacted Dr. Purkiss since the project has been completed and have asked him if he might repeat his workshop and then assist them in assessing their classroom learner profiles. Those who have participated have found the experience to be highly informative, non-threatening, and unobtrusive. The institution is developing a plan for integrating learning styles data collection as a regular part of its matriculation program.

Learning styles are often referenced in the literature of the "learning community." Rarely, however, is there direct involvement in any quantitative manner which has directly assisted the learning process in such a broad and dramatic way. This program has done so.

To Enhance Student Learning

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In October 1994, Rockingham Community College located in Wentworth, North Carolina, received a five-year grant under Title III of the Higher Education Act. One activity of the grant focuses upon increasing student graduation and job placement rates and improving institutional effectiveness through a comprehensive system of defining educational outcomes and obtaining the data needed to document the attainment of those outcomes.

Initially, the activity focused on providing professional development to help all faculty and staff members understand how to develop educational outcomes. To do this, the college secured the services of Dr. Jim Nichols from the University of Mississippi. Dr. Nichols provided workshops to faculty and staff and worked with small groups throughout the college in conducting assessments and developing outcomes. These activities were very well received, for his willingness to work very hard in helping groups develop or refine their goals and objectives as well as identify their outcomes. He provided the framework for functional areas and organizational units to develop appropriate outcomes for their particular circumstances.

In addition, Dr. Nichols provided training to the institutional research and planning staff on the proper way to assess the outcomes data. As soon as the outcomes were identified, the college's institutional research and planning office began to collect the information needed to assess the outcomes. Procedures and processes were developed that facilitated getting the appropriate information.

In the second year of the grant, all information from each section had been collected as follows:

- May and August Graduates are surveyed in late August.
- Instructors collect assessment data in capstone courses during late spring and summer quarters.
- Employers are surveyed in early September and October.
- Current students are surveyed during spring quarter.
- Faculty and staff are surveyed during May.

All the assessment data is recorded in an Assessment Record Book each year during fall quarter. Faculty and staff review the data and document how the results will be used for program and service improvement during winter quarter. At this time, they review the outcomes for the past year and recommend changes, addition and/or deletion of outcomes, means of assessment and/or criteria for success.

The Assessment Record Book for each program and service/support area is kept in the office of the dean for use in all departmental planning. A master document of all programs and services is housed in the president's and vice-president's offices well as a copy in the institutional research and planning office.

The Assessment Record Book has provided data for program advisory committees as they review curricula for currency. In addition, the data has been used by the committee involved in restructuring programs to convert them from the quarter system to the semester system. Furthermore, a campus committee has met regularly during the year to develop a process to continually evaluate the effectiveness of the developmental studies program providing students with the tools for success in credit programs. An analysis of the data is continuing.

Efforts will continue to gather data and utilize it to evaluate programs and services. Faculty and staff will be provided with professional development opportunities related to outcomes assessment and institutional effectiveness.

Writing and Reading Across the Curriculum Center
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SYNOPSIS

Six years ago, Patti Keeling, then chair of the Chabot College Language Arts Division, was in the process of reviewing instructional programs within her division, and was dissatisfied with the success of the aging Reading and Writing Centers that handled basic skills English curriculum. She began discussions with her faculty, seeking ideas for innovation. Encouraged at finding both ideas and energy for the innovating, she then began working with Dr. Victoria Morrow, the College Dean of Instruction (now titled Academic Vice President) toward a comprehensive plan to facilitate major changes in the basic skills English program. At the same time Dr. Morrow was working with a team considering similar requests for restructuring for basic skills mathematics and supplementing student services. The consequence of this collaboration was the writing of a Title III grant that funded all three projects.

The following is an account of the program that resulted in basic skills English - a program that put into practice contemporary theory and research regarding student learning.

Background: Setting and Plan

The student population served by Chabot College, always heterogeneous in ethnicity and class, has over the last decade and a half increased even further in diversity. In addition to the historic mix of Latino and African-American populations, the college has experienced an influx of immigrants from Southeast Asia, China, the Pacific Islands, Afghanistan, and the Middle East. Cycles of unemployment during this period have also resulted in an influx of students seeking job preparation and retraining at many blue and white collar levels. During the last decade instructors of all disciplines, but perhaps most intensely of basic skills English, have observed dramatic effects on the classroom. The former basic skills English program consisted of separate Reading and Writing learning

labs, both based on Programmed Instructional designs implementing modularized, self-paced (and nearly self-administering) instruction. A record of increasing attrition in these programs, as well as diminishing academic success of students completing the programs, indicated that our old bottles were bursting with the new wine.

The Title III grant, awarded for implementation during 1992-1997, was one of two catalysts that made possible the restructuring of basic skills instruction in both English and Math. The second was the college's conversion from a quarter system to a semester system in 1994, which provided an excellent opportunity for the rewriting of curriculum.

The Title III grant allowed funding for extensive faculty training, new instructional equipment, and leadership (in the form of directorships and coordinatorships). The key components that were to be piloted in the grant project all reflected the nationwide reemphasis on student learning-collaborative learning, learning styles awareness, computer assisted instruction (CAI), sensitivity to diverse cultures in the classroom, and tutor programs in English and Math to train and utilize discipline-specific tutors.

Faculty Preparation

Before the implementation of the Title III grant, the English instructional staff had been examining its existing basic skills programs and discussing new views regarding student learning. Several of the faculty had recently taken graduate course work in education; the division had received a new chair, who was enthusiastically supportive of innovation and knowledgeable of contemporary pedagogy; and many faculty had been attending professional conferences where discussions of new methods took place (most notably the College Composition and Communication Conference, the conference of the California Association of Teachers to Speakers of Other Languages Conference, and the Northern California Community College Computer Conference).

Once the Title III grant was awarded, the Academic Vice President and the chair of the Language Arts Division were able on a greater scale to provide for instructional staff for re-educating themselves. Their efforts more than doubled the number of staff members who sought and received training, on campus and off.

Foundations in Teaching/Learning Theory

From staff discussions emerged several instructional theories and practices that served as guidelines. One of these was the idea from Lev Vygotsky that complex intellectual skills, such as language use, are first learned through social interaction, particularly dialogue with others. Mina Shaughnessy had applied the same principle specifically to writing, claiming that "the teaching of writing must often begin with the experience of dialogue and end with the experience of a real audience, not only of teachers, but of peers" (*Errors and Expectations*, p. 83). This dialogic, interactive aspect of learning is also emphasized by constructivists, like Kenneth Bruffee, who has observed how standard written English is a mirror not so much of universal cognitive processes as of the conventions of particular communities, of which basic writing students have not been members. Anne Brown and Anne Palinscar apply the same concept in their "proleptic instruction,"

by which students perform tasks in groups that they would not be able to perform independently, the strategy being to remove the social support gradually so that each student develops independent skills.

Discussion of these concepts, as well as others regarding the advantages of multicultural perspectives and the necessity of addressing individual students' learning styles, led the English staff to write a document entitled "Articulated Assumptions," which lists basic theories and beliefs about language learning that guide the instructors' writing of curriculum and their classroom instruction. The document is also used for the training of new (full and part time) faculty. The "assumptions" promote whole language instruction; active, collaborative learning; the teaching of writing as a process; and the use of materials that are college level rather than "dumbed down" for purposes of "remedial" instruction.

Writing and Reading Across the Curriculum (WRAC) Center

The keystone of the basic skills English program is the WRAC center, which offers support services to students in basic skills English courses (and is expanding to offer similar services to students in any of the courses of the college). In the center students can take a supplemental English course English 15 that gives them more opportunities to practice and assess their English language skills, or drop in for one-to-one tutoring with tutors trained within the center (36 hours of training per semester for each tutor). Two (of four) rooms in the center have twenty-six Macintosh computers each, so that instructors of the new basic skills English courses can teach one to two hours (of five per week) with computers.

Each English 15 course is offered by a basic skills English instructor working with one or two WRAC tutors. In the course, students read college-level articles, discuss them in small and large groups, participate in Tutor Directed Activities (TDAs) that focus on interpreting and responding to college-level texts, and examine their written responses of their writing with peers and tutors.

In the drop-in center (the largest room of the four-room complex) students bring their writing assignments they have received from courses they are taking - their work can be at any stage, from understanding the assignment to looking at a final draft of writing. The students work with tutors individually. The tutors are trained to help students think through their assignments, generate and organize ideas, and guide students to making their writing interesting, logical, and clear. The WRAC center is not a grammar center where students get papers "fixed" before turning them in. A cardinal rule of the center is that a student's paper is his own, and that his ownership of the paper must never be compromised.

When basic skills English instructors teach in one of the computer rooms, they do so with the assistance of an Instructional Assistant and a tutor. The software on the computers is primarily for word processing and networked conversations from student to student at the computers. We do not utilize software for grammar drills. Students learn to write by writing, and discussing their work with peers and instructors. In the computer rooms they work on drafts of their writing, with the assistance of the instructor, tutor, and IA; they also often collaborate on pieces of writing, by writing together through the network, or by sharing computers. Regardless of the assignment, an hour in the computer room is an hour in which students not only write but speak and listen to each other.

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Summary and Results

In each of the pilot programs that tested the hypotheses at work in the WRAC center, as well as in the current practice of the center, the results are dramatic. Both student retention and student completion of the basic skills English program have increased. The college is currently conducting studies to measure the academic success of students who have graduated from the program. These results are the direct consequence of the implementation of theories and research in student learning, made possible by the vision and persistence of the college's instructional administrators.

SECTION III

STAFF DEVELOPMENT INITIATIVES ON CAMPUS TO DEVELOP INSTRUCTIONAL LEADERSHIP

PROGRAM ENTRIES

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In order to effectively utilize the regional distance learning networks that have been supported by grants from the Illinois Board of Higher Education, it has been necessary to provide training for those who use and support the distance learning classrooms and networks. There are many levels of users representing a wide variety of educational institutions. The distance learning networks include community colleges, public and private four year institutions, private institutions, and secondary schools. The user groups that must be trained included faculty, programming coordinators, technical staff, and future distance learning trainers.

The Center for Distance Learning provides the environment for training faculty to teach on distance learning networks, to explore the application of new technologies in the distance learning environment, to train technical personnel in system diagnostics and maintenance, and to serve as a resource for research into the impact and effectiveness of distance learning for instruction and training.

The Center for Distance Learning provides training for:

- Community college faculty who will teach on distance learning networks at the regional or statewide level.
- University faculty who will teach on distance learning networks or participate in discipline specific electronic meetings and professional development activities.
- Personnel who will become local trainers within their regional consortia.
- Support personnel who will become distance learning coordinators or facilitators.
- Technical personnel who are responsible for the equipment maintenance at their local institutions and as part of the larger regional network.
- High school faculty who will teach on the distance learning network.
- All levels of faculty interested in integrating Internet access and use into the distance learning environment.

Training workshops have developed and offered for:

- Faculty who are beginning to utilize the two-way interactive distance learning classrooms.

- Faculty who are interested in incorporating new technologies, particularly the Internet into the distance learning environment.
- Train the Trainer - The Center has developed a two-day training session that is designed to prepare faculty to become the training "expert" at their own institution. For those institutions just beginning to use the distance learning network, this type of professional development fosters the leadership required to get faculty to "buy in" to the potential that distance learning has to offer.
- Coordinators/Facilitators - Topics covered include management issues such as the scheduling of the distance learning classroom, recruitment of faculty, course selection, student registration, materials distribution and other operational issues.
- Technical staff who need the skills required to support all aspects of the distance learning classroom operation, including maintenance and troubleshooting of the equipment. A credit course, *Telecommunications Network Operations*, has been developed under the auspices of the Center.

During FY96, the Center for Distance Learning provided 235 faculty and staff with a variety of training opportunities. Effective methods for involving faculty and staff include:

- Utilizing faculty as master teachers in the presentation of the training.
- Compensation for time spent in training.
- On-going support as faculty teach over the distance learning network.
- Flexible support services for faculty and students (i.e. learning resources, registration, bookstore).

The definition of distance learning is changing and expanding to include other methods of delivery such as modem-delivered instruction via the Internet and live, interactive video-based instruction into the home or business, and ultimately to the desktop. In addition to continued training for the traditional two-way interactive, video-based, distance learning classroom, this expanded view of distance learning will require that faculty training remain an on-going effort in order to develop expertise in the use of these new technologies and methodologies.

As technology becomes more integrated within the educational process, the need for training at both the pre-service and in-service levels, continues to grow. Institutions can replicate the practices adopted by the Center for Distance Learning at Waubonsee Community College to help meet this critical need.

Educational Excellence Through Instructional Leadership
Aims Community College
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Aims Community College has earned a reputation, state-wide, as an institution that exemplifies high standards of learning. Earning and maintaining this

reputation is based on an institutional commitment to quality learning for all, grounded in an environment that nurtures instructional leadership.

How did we create and how do we subsequently support such an environment? Initially, the College integrated arts and sciences, occupational education and continuing education. Based on the belief that all disciplines contribute equally to the education of students, integration embraces the fusion of theory and practice campus-wide and creates a seamless, comprehensive educational experience. As integration became the norm of institutional practice, we challenged traditional concepts of teaching, learning and advising; redefined these concepts in terms of our institutional purposes; imbued these concepts with respect for pluralism in our student and staff populations; and ultimately, reaffirmed instructional leadership as the underpinning of quality education. An expanded vision of instructional leadership resulted: Instructional leadership at Aims promotes learning as a way of life and promotes the behavioral and attitudinal changes inherent in any life-long learning process. Moreover, instructional leadership is the responsibility of all personnel. Finally, with the input of all College employees, academic initiatives were articulated. Responsive to dynamic external legislative influences as well as articulated internal values and diverse student needs, our academic initiatives drive our institution and guide our implementation of instructional leadership efforts.

Currently, the College supports several primary ways for fostering instructional leadership. Although addressed separately, there is a concerted effort to keep them integrated. The College recognizes their inter-relationships for creating the synergy needed for promoting high levels of instructional leadership campus-wide.

New Employee Orientation: This Orientation introduces new college personnel to major college functions within its values framework. During this two-day presentation, new employees are given the opportunity to not only understand the College, but also to define a personal relationship with Aims' values.

New Faculty Mentoring Program: All new faculty participate in the faculty mentoring program, through which they are paired with experienced faculty who have been trained in mentoring practices. Not only does this mentoring assist new faculty in honing teaching skills, it also provides emotional support and an expanded understanding of institutional values, procedures, practices, resources and culture.

Instructional Observation: The primary goal of observing faculty instruction is to promote the ongoing improvement of instruction. Based on a College-developed matrix of quality teaching attributes, the observation process consists of a pre-conference, observation and post-conference. All participants are trained on how to observe as well as how to be observed, constructively, and how to encourage individual teaching styles and academic freedom.

Student Advising: Advising students is viewed as a developmental learning process. Aims conducts a sequence of classes for faculty that emphasizes advising as fundamental to the teaching/learning process. This developmental model promotes an understanding of the inter-relationships among disciplines and the shared responsibility of the student and advisor for academic success as the basis of conscientious student planning.

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Administrative Internships: Open to all Aims' employees with a Master's Degree or higher, the administrative internship program focuses on the knowledge, skills and characteristics of community college leadership. Coalescing leadership theory and practice, the interns work with current College administrators, learning their specific functions as well as general College operations and their contributions to institutional and national leadership.

Institutional Leadership Awards: Annually, the College honors exemplary employee's and employee teams' creative and innovative contributions to the institution, to learning, to our students and to the community. Selected by students, administrators and their colleagues, recipients receive financial awards for their commitment to and demonstration of the College's values.

Center for Professional Excellence: Our recently created Center for Professional Excellence, linking all instructional leadership efforts across the institution, serves as the hub for faculty/staff development and programming, and as a clearinghouse for educational resources and equity in post-secondary education. The Center also ties Aims' employees to state and national leadership efforts.

In summary, Aims' initiative to promote and support instructional leadership began with a purposeful review of our mission and purposes and subsequent development of academic initiatives to guide and assess the progress of institutional excellence. Based on the tenor of these initiatives, we redefined instructional leadership and placed it solidly at the center of institutional success. Next began the individual, but coordinated, staff development programs —New Employee Orientation, New Faculty Mentoring Program, Instructional Observation, Student Advisor, Administrative Internships, Institutional Leadership Awards and Center for Professional Excellence—implemented campus wide. The result: A system-wide, multi-pronged effort to promote and sustain instructional leadership and thus institutional excellence and student success.

To determine the success of our efforts, we use a variety of internal and external indicators. Internally, we receive evaluation feedback (written, verbal and observation) from staff and students as they participate in various programs. We are particularly interested in student satisfaction surveys and student retention records, both of which indicate upward trends. These data are analyzed and programs are modified accordingly. Externally, we have garnered considerable recognition for our instructional leadership initiatives. Within Colorado, we received the prestigious Colorado Commission of Higher Education's Program of Excellence Award for Aviation Technology (only 36 such designations have been given throughout the State since the award's inception in 1990). We have also been invited to present our model at local, state, regional, national and international conferences. additional examples of accolades include receiving The Chair Academy's Regional Leadership Team Award (February 1997) and exemplary program recognition by the League of Innovation in the Community College (1994). Moreover, we have received over $2,000,000 in external grants and contracts since May 1996 to support College projects and programs.

Instructional leadership at Aims is a developmental process focusing on excellence in facilitation of student attainment, as well as continuous professional growth of the faculty, staff and administrators. We believe it is our role to provide

the environment and ongoing means and encouragement to promote an educational community commuted to excellence in teaching/learning.

Hawkeye Innovation Project (HIP)
Hawkeye Community College
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Contact Person: Barbara Roeder

During the Spring semester of 1996, an Instructional Technology Task Force was formed by Hawkeye Community College to investigate and recommend action related to the transformation of instructional technology at Hawkeye. The Classroom Technology subcommittee developed and administered a survey entitled Instructional Technology Faculty Questionnaire in May 1996. The 1996 Faculty Questionnaire survey results showed that there is a clear desire by Hawkeye faculty to utilize instructional technology in the classroom. The Academic Affairs Vice President designated a specific amount of Academic Affairs funds to be used for the purpose of the development by faculty of innovative technology projects in instruction.

The internal grants procedure, Hawkeye Innovation Project (HIP) grants, was developed and became effective July 1996. It is the intent of the HIP procedure to fund an innovative idea, not simply a new piece of classroom technology or conference attendance. The projects may involve technology to make improvements in teaching methodology or may provide release time to work on curriculum modification. Faculty members may design projects individually, in pairs, or in teams. HIP projects are funded for one year only. It is expected that the HIP awardees will take instructional leadership by creating and sharing projects that are replicable across the college. The HIP projects need to address the following criteria for funding: 1) to enhance the use of innovation in the teaching and learning environment at Hawkeye; 2) to expand the use of "technologies"; and 3) to improve teaching effectiveness. Each of these terms are defined within the written HIP procedure.

Faculty must discuss his/her proposal with other faculty members and department head to secure the necessary departmental support for the proposed project idea. Phase I of the process outlines the overall concept of the project and its benefits. In Phase II, applicants need to address activities, timelines, budget resources, specific outcomes, evaluation of the project, and dissemination of the project to other Hawkeye faculty.

Phase I submissions are reviewed by the HIP Committee to insure that they meet the HIP criteria and are not more appropriately supported by other college resources. Phase II submissions are reviewed by the HIP Committee which examines each proposal in detail for completeness, realistic scope, budget projections, and that departmental support is evident. The Phase II submissions are then reviewed by a Peer Review Committee consisting of three faculty members who are not already represented on the Phase I Review Committee nor competing for HIP funds. The Peer Review Committee independently and then collaboratively rate the Phase II projects according to the HIP criteria and rating system and reports their collaborative ratings with comments and

recommendations to the HIP Committee. The awardees are notified. A mid year project update and an end-of-the-year project report as outlined in each proposal must be submitted by each awardee to the HIP Committee. Project information is expected to be shared and available to any other interested Hawkeye staff upon request. The results or findings of a HIP project may be a great foundation for pursuing a larger or more in-depth grant on the State, Federal, or private foundation level.

The project title and brief description for each Hawkeye Innovation Project (HIP) grant funded as of December 2, 1996 follows:

Integration of Global Positioning System at Hawkeye - Project Concept: Two day training for Hawkeye instructors in three different departments to use GPS equipment and incorporate a module into their respective course(s) for the Fall 1997 Semester. The training will be provided by a Hawkeye faculty member who through an NSF grant has become an instructional leader in the field of precision agriculture which incorporates GPS/GIS technology.

Portable Teaching/Writing Station - Project Concept: Use of a notebook computer, Microsoft Office with PowerPoint and word processing software, color printer, and scan do box to form a portable writing/teaching station. This station will be used to demonstrate writing techniques, explanation of assignments, and brainstorming in the classroom with students to promote a more active learning environment. This project will provide a model for other writing classrooms.

Mathematics - A Laboratory Science - Project Concept: Using the TI-85 View Screen Panel allows all students to view the instructor's calculator screen at the same time. The instructor can become a learning facilitator, using the calculator to perform the time consuming manipulations and graphing, emphasizing concepts, developing problem-solving skills, and intellectual risk-taking among students. Training will be provided to other teachers in the mathematics field.

Professional Photography Digital Cameras - Project Concept: To incorporate digital cameras into classroom demonstrations, making them more interactive and meaningful. Students can see examples of lectured subjects almost instantaneously, thus reinforcing the instructor's message by hearing, seeing, and doing all in a short period of time. Digital cameras will also allow students to do practice assignments. Teachers across campus will be invited to receive training on this technology and use the digital cameras in their disciplines.

At Hawkeye, as in many community college classrooms across the nation, the emphasis on delivering instruction has shifted from the traditional lecture approach. Current technology has assisted in that transformation by providing an increased scope of interactive instructional methods. The HIP grant process enables those faculty who want to be instructional leaders the opportunity to enhance their learning environment with technology while demonstrating outcomes and imparting knowledge to other faculty. Our vision is that Hawkeye Community College will provide a replicable model for instructional leadership in the use of instructional technology in community colleges and innovation in teaching.

SECTION IV

INITIATIVES ON CAMPUS WHICH DEVELOP A CLIMATE SUPPORTIVE OF CHANGE

PROGRAM AWARD WINNER

Shifting Cultures: Addressing Concerns of Higher Experiences Within a Two-year College

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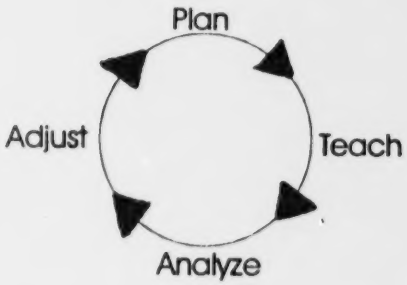
Contact Person: Dr. Evonne B. Carter

Educational institutions are not renowned for embracing change. But as the needs of our customers change, it is vital for colleges that wish to remain educational leaders shift their emphases and efforts to become learning communities. Milwaukee Area Technical College (MATC) is one of the largest two-year technical colleges in the country. MATC's mission is to provide quality occupational, academic and lifelong education for improving personal and employment potential. The college serves more than 60,000 students annually at four campuses throughout the Milwaukee metropolitan area. MATC offers a broad array of occupational and academic programs, ranging from diploma level to Associate of Science degree, Associate of Arts degree, and college transfer courses.

In response to the Wisconsin Technical College System's Institutional Effectiveness initiative as well as the NCA's new assessment focus, MATC made a commitment to begin a process for evaluating the academic achievement of students within their programs, courses and activities in each of the seven instructional divisions. These assessments will determine the extent to which students are developing the knowledge and skills required not only for prospective employment but also for educational advancement and personal improvement. Thus, in 1994, a committee of faculty, administrators, staff and students convened to develop an assessment plan.

The assessment processes developed are based on the Continuous Quality Improvement (CQI) model of Plan, Do, Check, Act: "Plan, Teach, Analyze and Adjust" for the components of courses and programs. Embedded in the plan are requirements for higher expectations of students, clear competencies for courses, use of multiple assessments, and reflection and adjustment of components developed for improved academic success. The implementation of the Plan began in 1995. A plan implementation steering committee was established consisting primarily of faculty, but also administrators and staff members (the Student Outcomes Assessment (SOA) Committee).



The first year of implementation was "rocky." Few faculty members read the plan, much less embraced it as gospel. Although the plan had been developed by a group made up primarily of faculty (12 out of 23), there was not sufficient buy-in from the other 2,000 full and part time teachers impacted by the recommendations.

The Implementation committee's efforts the first year were aimed at informing colleagues about the plan, and determining how implementation could occur. After the first year, 200 out of 2,000 courses had been revised and no other assessments had begun. Reactions to our efforts included mistrust, doubt and anger. The faculty union viewed the plan as a violation of the contract as a workload issue; members were advised that implementation was "voluntary." Aside from those individuals who viewed assessment as a professional responsibility, there was little motivation to get involved.

In the second year of implementation, it was obvious that the focus needed to change, not only for the committee, but also for the institution. As educators in a technical college, we are offering cognitive, affective and psychomotor "enhancements" to our students. In the Milwaukee area, there are numerous post-secondary institutions competing for students. We at MATC must be committed to providing the best product to retain our customers and to provide the community with the most advanced workforce. One major shift that needed to be made was to educate instructors that they need to be "customer-oriented" and that they were personally responsible for their "products."

The SOA committee began the second year of implementation with a communication blitz. Through all available modes, we communicated the foci of the committee, the opportunities available for professional development in the areas of assessment, the benefits of performance-based instruction, and the successes that were occurring. By the end of the first semester, there were fewer complaints about the plan from the faculty, there was a greater understanding of what was expected, and there was a sense of progress felt by the Committee members that also could be documented by the number of courses being revised and the number of people becoming involved. Members of the SOA Committee also tried to enhance our circle of influence through other initiatives. These included the following:

- Holding workshops on assessment issues and course development
- Offering certification courses for professional development at each campus
- Writing articles for the faculty union newsletter
- Developing informational brochures for mass distribution
- Presenting sessions at coordination meetings held at the beginning of each semester
- Holding a recognition day for those faculty members who revised their courses
- Sponsoring an "Assessment Conference" and inviting surrounding technical college personnel
- Attending divisional meetings with faculty and administrators
- Becoming members of the College's Core Committees to keep our issues at the forefront, and
- Attending conferences as presenters and participants to allow for a broader base of understanding and involvement.

The development and implementation of the Assessment plan at MATC has caused a shifting of the academic and educational culture. We have gone from an awareness of the plan, to an acceptance, and now to an application of the recommendations. Course revisions include: statements of clear expectations, application and synthesis of knowledge and skills, and alternative assessment strategies to enhance student success. As we revise courses and analyze our program goals, we are changing the status quo. And we are developing a new paradigm for education in the Milwaukee community.

Career and Employment Services
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The Career and Employment Services Center and the coordinator Michael Cinatl have created a climate supportive of change not only by enlarging the day-to-day functions of the Center and providing comprehensive workshops but also by promoting significant exchanges between students and employers and between employers and academic leaders. Moreover, Mr. Cinatl's vision of service has led him to synthesize the work of his Center with major community projects.

Mr. Cinatl's fifteen years of experience as a vocational/technical instructor accounts, in part, for this vision. He implemented the curriculum for the District's Interpreting for the Deaf Program which resulted in a model program in a matter of a few years. His ability to blend the strengths of individuals chosen to serve on the Program's Advisory Committee coupled with his resourcefulness in soliciting community support and involvement for the IFD Program have translated into the success he has been able to bring to the Career and Employment Services Center.

Unlike other employment centers within this College district, Cinatl's Southeast Campus Center offers far more than a referral/job posting system for students. The Center helps students and individuals from the community develop resumes and then guides and assists in job searches and even arranges interviews with prospective employers. The Center depends on its computer database to print job listings, and then students' resumes are formatted on the computer and entered as data to be faxed to prospective employers immediately.

Also unlike other employment centers within the District, the Southeast Campus Center plans and offers periodic workshops and seminars which educate the entire campus family and the community at large. Topics directly related to successful employment such as Family Budgeting, Ethics in the Workplace, Balancing a Career and Family, Planning a Career in the Military, and Job Quest for the disabled Workers are presented by qualified speakers and professionals. One highlight is the Career Image seminar planned for the campus secretaries and office assistants to present current trends in business attire and business communication.

Especially unique is the Center's multi-faceted relationships with business and industry. Mr. Cinatl actively solicits recruiters for the types of jobs that are most often requested by students or that more evenly match the degrees being obtained through our various campus technical programs. When these recruiters come to campus, they are provided an opportunity to recruit and screen applicants on site and are then provided an "interview room" to conduct more in-depth and decisive one-on-one meetings with the prospective employees. For company recruiters who cannot attend every college's job fair, the Center had led

in the formation of the Metroplex Association of Career Centers Consortium, a multi-college career center consortium (MAC-3) which sponsors a job fair once each long academic semester. The staff's primary role has been the coordination of student registration for the MAC-3 job fair which resulted in the processing of over 1400 student applicants. The Career Center has also developed working relationships with the Local Workforce Commission to handle larger volumes of company recruitment and testing needs. For example, the Center accommodated the Lear Corporation in the recruiting and testing 1500 prospective employees.

To address long-term needs, Mr. Cinatl and his staff have initiated a consortium of business leaders for the purpose of annually reviewing the workforce development needs of our area. The group meets under the title of "Learn Today-Work Tomorrow" and looks at ways that course curricula and teaching strategies can better prepare students for the world of work. The written report, disseminated to the business leaders and campus faculty, guides future course offerings, identifies areas of training, and tracks the progress of all implemented changes. An example of the productiveness of this project is the training agreement arranged between our Hazardous Materials Program and the Lear Corporation. Faculty of the campus program will provide Lear's employees training in ways to dispose of their manufacturing materials that are environmentally unsafe. Also, faculty in general academic courses, such as speech and writing, are exploring ways to incorporate ideas from the consortium into their curricula.

Within the community at large, Mr. Cinatl serves on the Education Committee of the Arlington Chamber of Commerce and specifically brings his expertise and the resources of the Center to bear on major programs in the public schools. Through the Arlington Scholars Program he has spent time in junior and senior high schools speaking about the relationship between good career planning and success in school work. In addition, he serves on the site-based management team for the "Newcomer's Center", an alternative school program for children who have recently moved to this country and have limited English ability. The Center's staff works with the parents of these children and with the teenage students themselves in seeking employment and creating an accepting environment among prospective employers for individuals who have good work ethics but poor English and/or communication skills.

The Career and Employment Services Center has developed a collaborative "Career Exploration Program" with two of the local school districts' alternative high schools. In addition to the staff's going into these schools to present workshops on various job search topics, the students are encouraged to participate in all on-campus recruitment activities and are given access to the computer database. The rationale is that these students will eventually become TCJC students and be familiar with the job placement system and better prepared to make a decision about their course of study and career path.

The list of accomplishments of this Center is especially important in light of its short span of operation. In existence only since August 1996, the Center has established itself as a driving force in the field of employment by working to interface the business community, the college community, and the community at-large as it addresses workforce issues that face them all.

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Abstract: What began on the Cattaraugus Campus of Jamestown Community College as an administrative initiative patterned on existing teaching learning centers has evolved into a highly successful TLC, a proactive and innovative project that could easily be adopted by other small colleges. Although the TLC addresses change in all four categories, we have chosen "developing a campus climate that supports change" since that climate is fostered by enhanced student learning through faculty development, instructional leadership, and the incorporation of technology into the curriculum.

History: In 1995 the Dean of the campus formed a task force to develop a proposal for establishing a Teaching Learning Center on the Cattaraugus Campus. She and six faculty members made several off-site visits to observe existing centers. The committee then wrote a proposal including philosophy, rationale, teaching and learning objectives, staffing, technical support, assessment, and budget.

That fall the co-directors of the Center were selected, and the first steering committee met to decide on the mission and goals of the TLC. The first decision the committee made was to involve as many of the faculty as possible in establishing a center. To do so, a survey was created and interviews with each full-time faculty member conducted. The interviews revealed that although faculty thought the TLC had potential teaching and learning on campus, faculty felt they had little time for additional activities beyond their teaching and advisement loads.

However, a number of issues raised by the survey could be immediately addressed. For example, the co-directors gathered catalogues of resources, ordered books pertaining to the teaching and learning process, and offered technical support for software programs. The Center was officially opened in the spring of 1995 with an open house and presentation on incorporating diversity into the curriculum.

Mission: Since our primary goal is quality instruction of students, we have an obligation to see that faculty have rich opportunities for growth and development. Faculty development must have a daily presence on campus. The mission of the TLC is simply to support and enhance teaching and learning at the college.

Moreover, many committed faculty are presently maintaining currency in their disciplines and conducting on-going classroom research. They are constantly tuning and perfecting their abilities to communicate a discipline which they are continually striving to keep abreast of. However, these faculty do this largely in isolation, under their own motivation, and without recognition. The TLC exists to support and recognize such activity.

Staffing: Two co-directors and a steering committee direct the TLC. The co-directors are the present directors of the learning assistance center (tutorial center) and the library/computer center. Both faculty members, these TLC co-directors represent the two academic divisions on campus, the two main classroom buildings, and two areas of expertise (educational research/theory and instructional technologies). The tech director is present in the center upon request; otherwise, faculty are free to use the center on their own during day or evening hours. Visits are logged. The TLC steering committee meets approximately once a month.

Operation of the Center: A small space, which houses state-of-the-art technology, is located next to the library director's office in the library. Currently the equipment includes two Gateway PCs; one PowerMac; a laser and HP color printer; a mobile Smartcart with laptop PC, projection system, VCR, and document camera; a scanner, a Hi-8 video camera and recorder; a television; and slide projector. Also in that space are a table, used primarily for committee meetings; a file cabinet for copies of articles and listserv documents related to current topics in the disciplines; shelves for book and videotape acquisitions; a display rack for the Fastback series from Kappa Delta Pi; and copies of Innovations Abstracts. Faculty use the center for previewing videotapes and software; developing PowerPoint presentations; and reading about collaborative learning, Supplemental Instruction, assessment, diversity, and instructional technology.

However, it had become clear from the faculty surveys that few faculty would actually come to the Center for the kind of discussions originally envisioned. The phrase "continuing presence" suggested that the physical space of the TLC would have to be reimagined. Consequently, our TLC exists in "virtual space" - all over the campus. Continuous conversations take place via personal contact and e-mail.

Programs and Activities: The cornerstone of the TLC programming is Teaching and Learning Exchange grants. The grants of $500 each are awarded to faculty for projects that enhance teaching effectiveness through the development of innovative techniques for curriculum design and delivery, as well as enhance the quality of students' learning. Since the inception of the TLC, approximately 40 grants have been awarded. To give an idea of the range and variety of projects, we will list a few of the more recent ones: a videotape on how to use the compound light microscope, a geometry supplement for the math curriculum, "Grammar Theater" performed for local elementary school children, a study of the "Impact of Students' Attitudes towards Learning Methods and Academic Performances," a handbook for Internet research using th.. Macintosh computers, a study of how students' reading behaviors affect success in developmental math courses, portfolio assessment, PowerPoint presentations on child abuse and another on "Transforming Reading through Listening," a Human Services networked advisement program, an 8-week series of workshops on reducing test anxiety, a compilation of Student Success Seminar assignments, and a creative writing electronic library publication. Several of the grants have been co-authored.

The TLC's outreach activities include numerous e-mail messages forwarded from listservs including AERA and LRNASST; the TLC newsletter published 6 times a year; distribution of journal and news articles, and faculty forums. Recent forums have explored "The Kindness of Failure," "Classroom Management," "Plagiarism

from the Net," "Using the Internet for Research," and "Software for the English Lab."

Success: The success of this center, a proactive TLC focusing on outreach, is due to careful planning, flexibility of programming, a "continuous presence" in its virtual space, staffing, continuing conversations, and frequent feedback from users and non-users. Ninety-six percent of full-time faculty and over one-fourth of the part-time faculty use the center. Over half of the full-time faculty have participated in six or more of the ten activities. If retention is defined as "all activities which enhance teaching and learning at the college," the TLC is certainly a major part of that effort as well.

A Climate of Continuous Improvement

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Contact Person: Dr. John Neibling

San Juan College is a proactive institution, always looking for ways to innovate and improve what we do. This is accomplished through the leadership of the President as well as several systemic processes designed to encourage participation, input, and creative thinking by all levels of employees. Developing and maintaining a climate for change is achieved through activities in four general categories, 1) professional development training, 2) soliciting input from employees, 3) self-study and assessment, and 4) action planning.

Professional Development Training

SJC offers many training opportunities to build employee skills and support a climate of continuous improvement. SJC offers regular classes for faculty and staff through its Business and Industry Training center in a variety of subjects ranging from computer skills, safety, to customer service. Certain courses are required for all employees and others are optional depending on the interests and job responsibilities of the individual. SJC recently received certification to use the Zenger Miller Leadership training package and is now offering this series to its supervisory staff. For the past five years, SJC has been training the full-time faculty in computer technology for instruction through a Title III grant. In addition to job skills training, SJC offers Wellness workshops free to employees on topics such as CPR Training, smoking cessation, Native American culture, depression assessment, and eating disorders.

Soliciting Input from Employees

Employee input is obtained through a variety of avenues including surveys, suggestion boxes, standing committees, ad hoc task forces, and the annual planning process. SJC conducts an annual Climate Survey of employees related to such issues as trust, communication, innovation, quality of supervision, empowerment, teamwork, and employee satisfaction. The results of this survey

are reported to all full-time employees, discussed in meetings, and tracked as a key performance indicator. A suggestion box system was implemented this year to provide employees a method for making suggestions about processes that can improve efficiency and reduce costs. All suggestions are reviewed by the Vice Presidents and an award will be given for the best ideas. The standing Administrative Staff meeting was recently reorganized by an appointed subset of its members to address "hot" issues in its monthly meetings. These issues include enrollment management, distance education, curricular innovation, and professional development. These rotating topics allow each member to report on activities, pose questions, bring in related articles, and discuss new directions. An example of a task force is the Technology Planning Team, consisting of faculty and staff. The TPT was charged with developing a forum for discussing new directions in technology and making recommendations for the budgeting process related to technology.

Self-study and Assessment

In addition to mandatory assessments by outside groups, SJC participates voluntarily in a variety of assessments. The Business Division recently underwent a voluntary process and received accreditation from ACBSP. The college participated in the New Mexico Quality Award process two years ago and received an award at the middle bevel. The quality award is based on the national Malcolm Baldrige criteria. The college used the Feedback Report from the quality award process to identify areas needing improvement. SJC is preparing to submit an application at the top level this year. SJC is also committed to student learning outcomes assessment which is overseen by a faculty directed committee. This committee reviews outcomes from all divisions in the college and reports annually to the faculty and administration. This committee recently developed a new approach to encouraging and tracking the development of outcomes assessment at the course and program levels. The administration is also developing Key Performance Indicators that relate measures to institutional objectives identified in the 5 Year Plan. These indicators will allow the administration to track progress in achieving its goals and identifying problem areas.

Action Planning

The college has a comprehensive planning process that is designed around the Malcolm Baldrige criteria. The process includes both a 5 Year Plan as well as annual action planning. The 5 Year Plan was developed by the heads of all departments or units in the college. These same department heads are responsible for submitting action items in their areas that address the goals and objectives of the 5 Year Plan. Quarterly status reports are submitted to track progress in achieving the annual action items.

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Community Leadership for Community College Faculty and Staff

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Black Hawk College, through its Leadership Institute, has developed a 45 contact hour community leadership program for the faculty and staff. The program is developed around the "what, whys and hows" of leadership. What are the community issues? Community can be defined as the college community or the external Community. The "whys" are leadership attitudes that will be enhanced or developed. The "hows" are leadership skills that are needed to be an effective community leader.

The focus of the program is to create "grassroots" leaders - those who see a need and have the ability and sense of responsibility to make a difference.

The leadership sessions are held at community sites that provide a broader awareness of our community and insights into opportunities for service.

The thoughts of Robert Greenleaf on "servant leader" form the hallmark of the program; our vision is to develop leaders who assume responsibility of the good of the community and initiate skillful action, after reflection. Attitudes developed include inclusiveness, ethics, responsibility, integrity, credibility and seeking the common good. Skills developed include understanding leadership and leadership styles, listening skills, deliberative skills, team work and developing teams, problem-solving and creating change.

The program is very interactive and participatory. Participants are expected to attend a minimum of 80 percent of the classes; outside reading and projects are required, as are activities that create a broader view of the community.

Outcomes of this program indicate participants have more involvement in leadership activities within the college and in the community. Service has become a natural part of their life. Self confidence has increased; people see themselves as leaders. Participants seek the bigger picture and act for the greater good of the institution.

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Creating a Context for Change:
Professional Development in a Learning Organization

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Darton College is a two-year institution within the University System of Georgia providing a first line of educational access for a very diverse student population. With our emphasis on quality instruction and extensive academic support programs, it is essential that our faculty and staff keep abreast of the latest teaching techniques, instructional technology, and counseling/advising strategies to assure success for both academically proficient and high-risk students. In response to the shifting economic, social, and educational backgrounds of our student population, Darton College has implemented a comprehensive faculty and staff development program with the purpose of creating a context for change.

The philosophical base of the program is a positive, future-oriented "growth approach" that promotes faculty, staff, and institutional vitality through an emphasis on the development of the whole person and the whole organization with the end goal of increased student success. The central concept is that desired change cannot be effected unless there is a learning organization where all members are learning and growing.

The centerpiece of this continuous program is a four-day Fall Workshop held on the Darton campus at the beginning of each academic year. Workshop sessions highlight major college initiatives and address specific faculty and staff interests identified in surveys. Setting the direction of change for the year, Workshop themes underscore the necessity of preparing for the future. The 1995 Workshop theme was Breaking Barriers; the 1996 was Expanding Horizons.

Planned by the Faculty Committees, the participants have ownership in the program and, indeed, many Darton personnel are directly engaged in conducting and facilitating workshop sessions and activities. In the 1996 Workshop fifty-two faculty and staff were presenters. Seven Darton students and six outside consultants made presentations. A sense of community and shared purpose is further enhanced by college hosted coffees, luncheons, and a special evening affair that includes spouses and friends.

An overview of the 1996 Workshop illustrates the many development opportunities designed to channel and direct change. Faculty and staff selected from 27 non-technology sessions and 26 technology sessions. Five general sessions addressed college-wide issues. The Workshop was designed to promote change in the following areas:

1. Internationalization: In support of the college mission to prepare students to succeed in a global Community, three sessions focused on the enhancement of an international perspective. Focus on the World featured two newly arrived foreign students (from the Ukraine and Mexico) and a Darton student who had studied at the University of Godollo, Hungary, as a exchange student in the summer of 1996. The Darton Director of International Education Programs discussed opportunities for faculty

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foreign study, travel, and exchange. Several Darton students and their faculty sponsor shared their 1996 spring break travels in Darton Goes to Spain. The Chinese Language and the 21st Century was the subject of another session. The international focus was highlighted by a special "Evening at the Museum" of French Impressionist paintings and music.

2. Innovation in Instruction: The Fall Workshops are a forum for sharing innovative teaching strategies to improve student learning. Faculty and staff from all disciplines attend these sessions, examining application of the innovative strategies in other content areas. The Director of Service Learning at Miami University conducted a session on Service Learning Across the Curriculum. An exciting interdisciplinary project involving the Drama and Human Services Technology departments was presented in Using Drama in Learning. A business professor explored the success of Case Studies Approach in teaching course concepts.

3. Increased Awareness of Community College Issues: Two sessions provided a forum for exploration of contemporary issues in higher education. Participants in one three-hour session identified issues for dialogue and then formed small discussion circles. The session closed with an exchange between circles. In another issues session, five panelists led a discussion of academic freedom.

4. Applications of Instructional Technology: A major college initiative is to enhance student learning and increase student access to educational opportunities through appropriate use of technology. Three 4-hour time blocks were devoted to technology workshops conducted by Darton staff. Topics ranged from introductory to advanced sessions, including sessions on Morphing, Claris Works, Auto Cad, PowerPoint, and Creating a Web Pagemill. Adapting instruction to distance learning was addressed in two sessions: The Human Factor in Distance Learning and A Distance Learning Practicum.

5. Increased Vitality through Support of Personal Development Opportunities: The Fall Workshops recognize that professional success is directly related to personal health and success. These sessions receive rave reviews in workshop evaluations. Three of the favorites were Keeping Health Along the Way Using Jin Shin Do, Nature Walk, and Deep Water Exercises. Two personal development sessions focused on stress management.

A sampling of 1996 Workshop evaluation responses reflect the impact on the participants: "Excellent workshop - I liked the wide variety of topics & subjects presented." "These sessions were beneficial. The ones on Banner and Semester Conversion touched on some aspects of what changes we can expect." "The best I have ever seen at the three universities I have been at. This really helps build cohesion among faculty and staff." "A beautiful evening at the Museum. I appreciated the two opportunities to have lunch with colleagues here on campus." "Every workshop I attended was wonderful. I especially enjoyed the Nature Walk."

To sustain continued growth, two additional days a year are set aside for professional development activities. Mini-workshops are conducted throughout the year. Because the program is campus-based and committee coordinated, funding is minimal. Also, using local resources for change makes it possible to

have a continuous program that reaches all personnel and involves everyone in moving towards desired goals. The program model is flexible and can be scaled down or expanded. It can be adapted to an academic division or to consortia. Thus, the possibilities for replication are many. The most important characteristic of the program is that it is institutionalized and so creates a climate receptive to change.

I Can See Clearly Now
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The "I Can See Clearly Now Multicultural Leadership Retreat," was carefully constructed to engender change on a deeply personal level both in multicultural awareness, as well as how that awareness translates into leadership responsibility. Leadership as understood at this retreat is not embodied in a person or persons but is regarded as a process. It is the process of one person acting in a leadership role helping another person to become empowered. Burns (1978) refers to this type of leadership as 'transformational leadership' which "occurs when one person takes the initiative in making contact with others in such a way that leaders and followers raise one another to higher levels of motivation and morality". (Burns quotation in Boatman, "A New Student Leadership Paradigm: Diverse Perspectives on Developing Leadership," 1996, monograph in press, p.20). In her paper, "A New Student Leadership Paradigm: Diverse Perspectives on Developing Leadership," Boatman (1996) also writes, ". . . this perspective suggests that leadership is not a set of personal attributes or an assigned or emergent position, but rather an activity, a state of mind, a process that creates an organization or community's culture or vision." Therefore, based upon this understanding of leadership, students during this retreat were encouraged to view themselves as participants in the process of change - each having a responsibility to challenge racism, discrimination and the existing societal structure wherein a dominant culture prevails.

The "I Can See Clearly Now Multicultural Leadership Retreat" identifies contributions of the various groups in society, however, the focus is more on *how* to learn rather than on learning specific information. Learning in this instance is not regurgitation of information, nor is it information gathering, instead during the retreat, learning is viewed as a process where new understanding is manifested in changed behavior.

To accomplish this, the EDIT technique is expounded by Kolb, in his book *Experiential Learning: Experience as the Source of Learning and Development*, was employed.

EDIT is an acrostic for Experience, Describe, Interpret and Transfer. In this approach students first experience the learning event, then describe what happened as the experience occurred. They then infer what the experience meant

by answering the essential question, "What did I learn from the experience?" Finally, they transfer what was learned from the experience to other contexts.

During the retreat students were first allowed to EXPERIENCE the learning event through the Brown eye, Blue eye exercise conducted by Jane Elliott. In this exercise participants were labeled inferior or superior based on the color of their eyes. Elliott declared brown eye people to be better and more intelligent, and granted them privileges, that were denied to the blue eye group. Students in the blue eye group became acquainted with the feeling of belonging to a condemned group which could never win. For a period of three hours the students experienced/practiced discrimination, verbal abuse and victimization.

Following this session students were allowed to DESCRIBE what happened while the experience occurred. In small groups students individually and collectively wrote down their feelings during the exercise under the heading "My Thoughts About This." One student wrote, "Scared of myself, the way I was so able to hate others so readily." Another wrote, "Some people got really pissed off and some even left, I wish I had that luxury."

Throughout the retreat students were allowed to INFER what the experience (Jane Elliott's presentation and subsequent sessions) meant by answering the essential question, "What did I learn from the experience?" Along these lines students shared their thoughts by writing on four posters with the headings, "Things I am learning about me," "Things I am learning about others," Things I am learning about leadership," and "Things I am learning about culture." Under the heading "Things I am Learning About Me" some of the comments were: "There are many things I need to change." "I'm not quite sure I'll not mismanage POWER!!" "I've learned I like the shoe to be on the other foot for once."

Finally, students were encouraged to TRANSFER what was learned from the experience to other contexts, making theory-to-practice applications. In this way, students wrote down their thoughts under the heading, "What Should/Can I Do About This?" Some of the responses in this case were: "Stop (racist) remarks when they are said. Bring it to people's attention as they do it." "Bring our ideas (about multicultural issues) to schools and our communities." "Minorities need to change their attitude 'minorities vs. minorities.'" "Be careful of our own use of stereotypes, and let people know about correct prototypes." "Define people as individuals-not groups."

In Nebraska's schools, a person walking down the school hall would meet 88 white faces before encountering a single person of color! Little wonder that it's nearly impossible for white students to understand what it is like to be a minority, or for persons of color to understand what it is like to feel they are a significant part of the school culture. However, in the safe and controlled environment created during the "I Can See Clearly Now Multicultural Leadership Retreat," both white students and students of color benefit from and experience in a new way the power of inclusiveness. Both experience the addictive lure of dominance and both experience the de-humanizing affects of discrimination.

Early reports arising from this three day experience indicate that the 52 high school and college students have participated in a life affecting, result oriented event. Through these students new multicultural groups are being founded and class discussions about multicultural issues are being initiated. One set of

students have approached the administration about the lack of a multicultural inclusive curriculum. We believe that this immersion experience coupled with Jane Elliott's presentation and experiential learning strategies effectively create an environment where multicultural leadership may result for both white students and students of color within their circles of influence.

Part-time Faculty Integration
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Clackamas Community College (CCC), in Oregon City, Oregon, has developed an effective program to promote better inclusion of part-time faculty into the fabric of the institution. We believe that this effort is not specific to this institution and can be adapted by other institutions with similar results.

Over the course of an academic year, CCC employs approximately 600 part-time faculty, half of whom teach credit classes, accounting for approximately 25 percent of the credit FTE teaching load. In 1993, a study aimed at the issues and concerns of the part-time faculty was conducted at CCC. One of the main findings of the study was that part-time faculty felt disassociated from the college in a number of ways. In response to these concerns CCC initiated its plan to more fully integrate part-time faculty into the full-time institution.

The success of CCC's plan was recently affirmed by a commendation in the college's accreditation report: "It is particularly noteworthy that part-time faculty are provided with almost equally generous support for professional development activities. Many departments take great pains, beyond this, to make part-time faculty feel an integral part of the institution. Part-time instructors report that they appreciate this effort, which helps promote stability in its hourly-faculty ranks." (p. 16)

The impetus for this effort came from the college's president, which is one of the major factors for the program's success.

There are two main components to the program. At the President's direction, a Part-time Integration Committee" (PTFIC) was formed to develop and implement strategies to address the feelings of disaffiliation among part-time faculty. This committee reports back directly to the college's highest internal policy-making authority, the President's Council.

The second component of the program involves including the president (or his designee) of the part-time faculty association (PTFA) as a permanent member of the institution's main policy-making bodies: the college's Board of Education, President's Council, Instructional Council, Curriculum Committee, Instructional Resources Committee, etc. Additionally, the PTFA president is paid for the average six hours per week spent representing the PTFA on these bodies.

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These two actions have yielded a multitude of positive changes in the way CCC treats its part-time faculty. On an institutional level, CCC has better harnessed the resources of its part-time faculty, has increased awareness of part-time issues and the need for their inclusion in college activities and decision-making, and has heightened the appreciation of part-time faculty among all levels of the institution.

Activities and accomplishments of the PTFIC have ranged from major issues to seemingly minor but still pertinent changes:

- Creating a part-time staff directory listing names, office extensions, and on-campus mailing addresses, which is distributed to the main college switchboard, information centers, and departmental secretaries.
- Assigning voice-mail boxes for each part-time faculty member, and including them in "all staff" broadcast messages.
- Revamping the hard-copy mail distribution system college-wide to ensure that part-timers get copies of "all-staff" memos, announcements, etc.
- Including part-time faculty birthdays with the rest of the full-time staff in the bi-monthly staff newsletter.
- Creating special inservice events/orientation for part-time faculty at the beginning of each term.
- Including part-time faculty in Teaching Excellence projects and institutional mini-grants for instruction.
- Increasing funding for professional development at the departmental level.
- Including part-timers in departmental activities (e.g., curriculum/textbook decisions, celebrations, etc.).
- Including part-time faculty in institutional awards and recognition events.

Although the first three years of this program have been very successful, there is still more to be done. Issues currently being addressed by the PTFIC include improving the evaluation process for part-time faculty, and developing adequate office space for part-timers. Because of a climate supportive of change at CCC, we believe that these initiatives will also have positive results.

Support Staff Development Growth Day
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Elgin Community College would like to nominate the 1996 Support Staff Development Growth Day in the category of "Initiatives on campus which develop a climate supportive of change." The Growth Day program was one devoted entirely to technology. For the past year ECC had been in the process of creating an in-house network, working toward a paperless environment and was meeting with various software companies to purchase an integrated system that would manage all aspects of the college-student records, personnel payroll, finance and every department in between. This meant that staff were being required to learn

new ways of doing things and to become familiar with new and ever changing technologies. It was a cause for concern and stress for staff, as they did not know how these changes would affect their jobs and the way they worked.

As a result of this need, the Support Staff Development Committee planned a day devoted to technology and how it would impact staff, both at home and at work. It was an all day activity open to all support staff. There were nine breakout sessions, several of which were repeated, all conducted by ECC support or administrative staff. The keynote speaker was ECC's Director of Telecommunications and Data Processing, who gave the staff an update on the college's progress on the development of the in-house network, as well as an update on the purchase of an integrated computer system. Breakout sessions included areas such as "surfing the Internet", "how to purchase a home computer", training on Windows 95, "e-mail basics, voice mail basics, and using the network", user group discussions, and training on how to use the multi-media software.

The program was well received with 101 out of a possible 136 staff members attending. The approval rating was 88 percent for not only the presenters but the program as a whole. The result of the program was a better informed staff in regard to not only the technologies they would be using on a daily basis, but the information and confidence needed to meet the challenges presented to them.

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ABOUT NCIA

The National Council of Instructional Administrators (NCIA) is a private, nonprofit, professional organization affiliated with the American Association of Community Colleges (AACC). With membership in two-year institutions across the nation and Canada of around 4,000, the NCIA is the largest such affiliated council.

Committed to leadership, innovation, advocacy, and development for the improvement of teaching and learning, NCIA is the national voice for the opinions and concerns of administrators of instructional programs in two-year colleges. The Council is consulted by the leadership of the American Association of Community Colleges and by other national organizations on matters of importance regarding instructional programs.

In addition to a volume of Exemplary Instructional Programs, NCIA publishes a quarterly newsletter, and, on a periodic basis, literature searches on vital instructional topics. Regional and state workshops are sponsored, and major presentations are made at various annual conventions including the annual AACC meeting.

Persons interested in membership in NCIA may:

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